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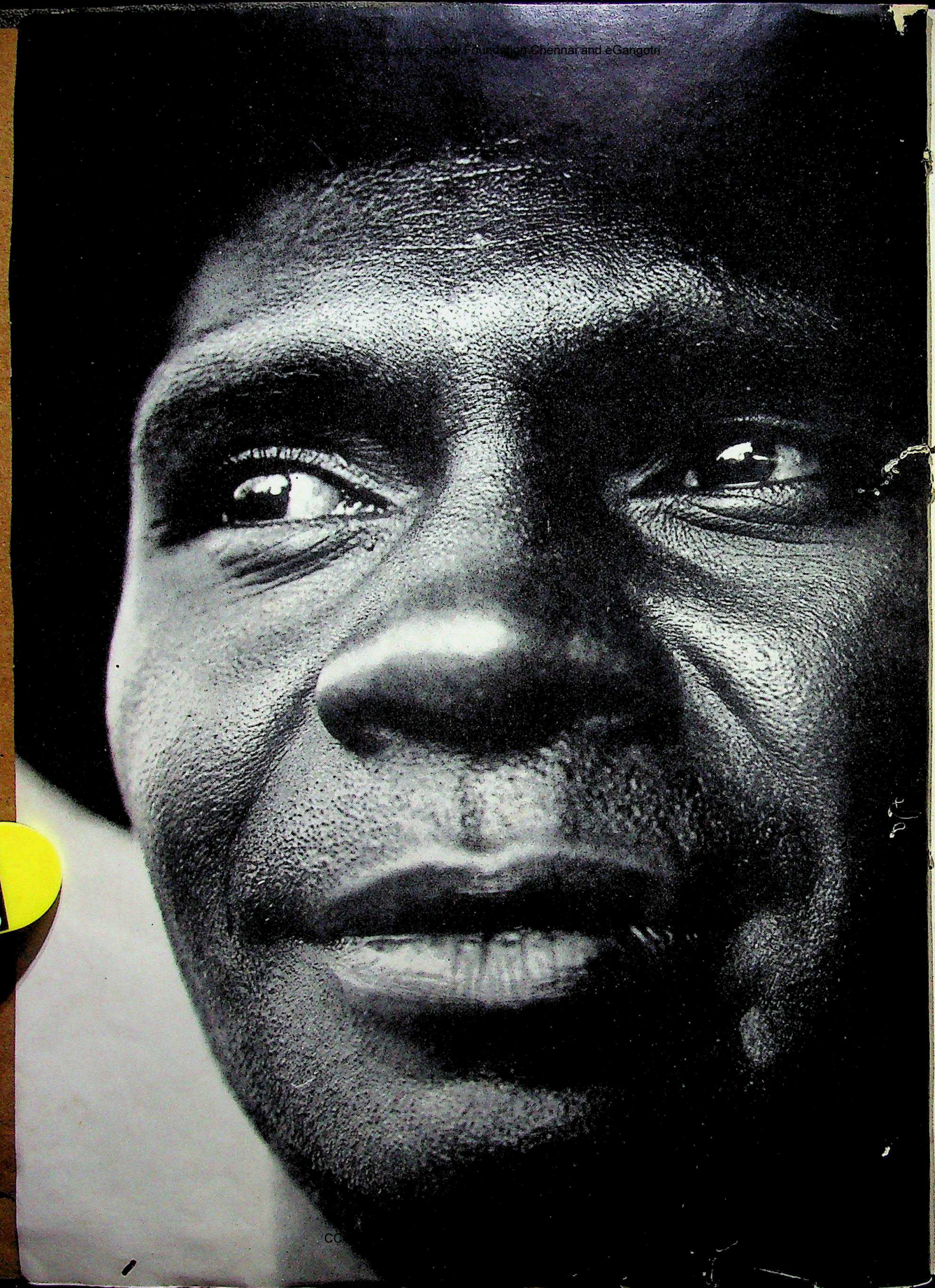

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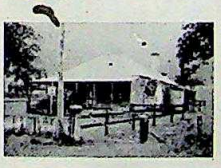

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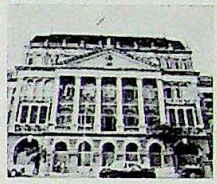

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MASKSAN

Topeng: A regiona Javan

TOPENG means mask, but in the context of the Indonesian theatrical performance of that name it refers to the principal dancer and other female dancers. The origins of *Topeng* as a dramatic *genre* can be traced, with *Lenong* and *Stambul,* to the area of Jakarta culture which extends from the Krawang area in the east to the eastern Banten area in the west. To the south it is bordered by the Sundanese culture area.

A characteristic of Jakarta culture is that it uses the Jakarta dialect derived from the Malay language. In fact, the culture of Jakarta has been influenced by many others, such as Java-Sundanese, Javanese and also Chinese. But by use of the Jakarta dialect the traditional dramas are distinguished from those belonging to other cultural areas.

Though *Topeng* incorporates both dance and drama, it would be misleading to call it dance-drama. The dance and straight drama content varies from one *Topeng* performance to another. For example, in some performances the dancing takes place only at the beginning and at the end; the drama is in the middle. The following description of *Topeng* is based on a performance I saw in Bekasi, about forty kilometres east of Jakarta, some time ago.

In this performance, the only dancer who wore a mask was the last one, a man. His *rôle,* it seemed to me, was to provide an epilogue. He danced and sang in a comical vein, commented on the audience and criticised the condition of the community. His dark brown wooden mask had two large upper front teeth but no jaw; the absence of a jaw allowed the dancer to speak easily. The forehead was large and broad, and the cheeks were heavy. The overall impression was amusing.

The performance took place in the middle of a field. A tent erected to accommodate the *gamelan* players also served as a make-up room and rest room for the performers. A white screen covered the front of the tent,

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KSAND MEN

giona Javanese dance form

Wahyono M.

and the ground before the screen was the 'stage' proper. The 'props' consisted of a large circular basket placed in the middle of the stage to act as a destination indicator (the performers walked around it to show that they were going from one place to another), and a table and two chairs set in front of the screen.

It is usual for *Lenong* performers to enter the stage from the left (as seen by the audience) and leave from the right. In *Topeng,* however, there do not appear to be rules regarding entries and exits; the performers come on stage and leave from either side.

The performance was, as is usual, an all-night affair, beginning at nine and going on till five the next morning. A number of oil lamps and kerosene pressure lamps provided the lighting. The purpose of the sound amplifiers installed on the tallest tree bordering the field was to attract people to the show from neighbouring villages.

In the *gamelan* for *Topeng,* the instruments are a *rebab* (a kind of viol), two *kendang* (drums, a large one and a small one), three *kenong*, one large *gong,* and the *gong tahang* (a plate of metal suspended over a cylindrical metal box which acts as a resonator). There is one other instrument, a *kecrek,* which is a bunch of flat thin pieces of metal strung together and struck with the hand. The two *kendang* are played by one man, the two gongs by another, and a third man plays the two *kenong*.

The songs and melodies are mostly Jakartan and Sundanese. One of the Jakartan songs always found in the *Topeng* performances is called *'Oncom Lélé'*, and there are many other Jakartan songs mostly similar to the *Lenong* songs. In the early part of the performance, which is full of jokes, a *Ketuk Tilu* beat is often played

On these two pages, scenes during Topeng *dance performances (photographs, Tanzil C. S. Photo Service); opposite, bottom left,* Topeng *masks (by courtesy Dewan Kesenian, Jakarta).*

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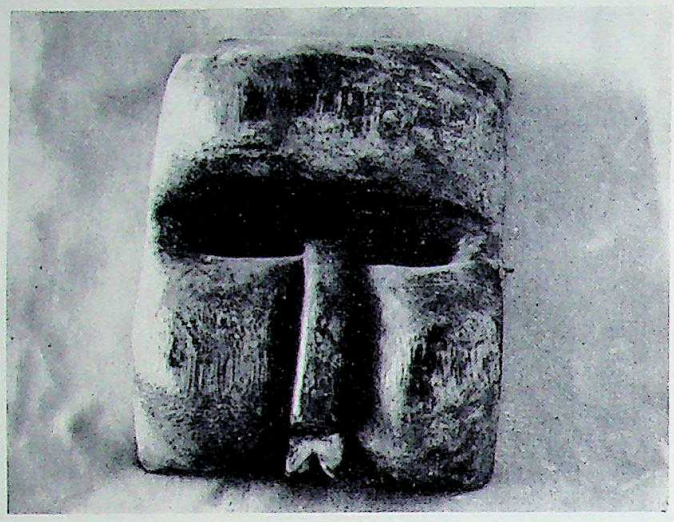

ABOVE: Primitive Jantuk *mask from the Sulaiman Collection. BELOW: I Wayang Lendra in a* Jauk *dance—another version of Indonesian masked dancing — this from Bali. (Photo by courtesy Australian Elizabethan Theatre Trust).*

to accompany the dance of 'self-defence'. Sundanese songs that are currently popular may be played at the request of the audience. The performers can then make money, since members of the audience pay to hear a song. It is a kind of 'listener's choice' period generally, Sundanese songs accompanying the main story in the performance.

The group of performers consists of about fifteen to twenty people, including musicians. Five to seven are women. Sometimes a dignitary of the village to which the group belongs supervises the performance, and an official of the Cultural Department is attached as an honorary member. The officials are there to improve or maintain the standard of the performance, though in many ways they act as censors. The dances can be very erotic, and the officials may feel it necessary to prevent their becoming embarrassing.

Almost every village in the area has such a group of performers, and they vie with each other. The best known are those that have a beautiful principal dancer/actress.

When the preparations have been completed, the *talu* (a song which signifies that the performance is about to begin) is played. The music for the *talu* bears a surprising likeness to Balinese music. In this part of the performance each of the *kenong* is played by one person only. They are beaten with wooden sticks and so are the *kecrek* and the *kendang.* Not only are the skins of the *kandang* beaten but also their wooden frames; usually the skins are beaten only with the palms of the hands and the fingers, though there are other occasions when sticks are used, especially on the small *kendang.*

The *talu,* the first part of the performance, takes about ten minutes. The second part, where the principal dancer and other women dance, follows without any interval. The dancers wear richly ornamented clothes and are heavily made-up. Head-dresses, I believe, at one time were embellished with gold leaf or gold powder, but gold paper has since been substituted. A crescent-shaped ornament attached to the forehead and tilting forward is made of cloth and decorated with gold paper.

The women dancers are now joined by men who dance with them under official surveillance. Men from the audience dance with the women on stage. The movements of the dance are very dynamic, especially those of the men. The erotic aspects, and especially the movements of the hips of the women, excite men in the audience, which becomes involved: a man will give his jacket to a certain dancer and will be favoured with a movement especially for him. Often the dancer will select her 'victim' by putting her *selendang* (a kind of stole) round his neck. The 'chosen' one then goes on to the stage and dances with her in an erotic manner; for this privilege he pays, say, one or two hundred rupiahs. If a dancer is attractive, many men in the audience are eager to dance with her and they sometimes pay well.

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In this second part, the male performers make jokes; this is called *dedogeran* or *banyolan.* Many of the jokes are bawdy, and the talk of the men is unrestrained.

This form of drama uses a *dalang,* though his *rôle* differs from that of the *dalang* in other forms. Unlike the *dalang* of the *Wayang-kulit* (shadow play), the *Ludruk* and *Ketoprak,* who is one person, every man behind the screen can act as the *dalang.* His function is sometimes to speak lines which the performer speaks after him; he speaks loudly so that the audience, too, can hear. He is the director of the performance and often makes bawdy jokes.

Each performer takes two or three *rôles* in the story. Each has to look after his or her own changes of dress and make-up and has to be quick about it, since the dialogue continues on stage. There is always something of interest taking place in the tent behind the screen, and a relaxed, easy atmosphere surrounds the play.

This second part ends at midnight. Then, in the third part, comes the real drama, the core of the performance. All the actors and actresses change clothes and make-up. In this part they play the *Lutung Kasarung,* an old Sundanese story. As an 'overture', the principal dancer comes on to the stage and performs a dance that is similar to the Sundanese Mask Dance, but she does not wear a mask. All the performers know the story by heart, so there is no need for a script.

The story is as follows: The king of Galuh Pakuan, in West Java, had seven daughters. The eldest was Purbalarang; the youngest and the most beautiful was Purbasari. The king was getting old and wished to retire to the forest as a hermit, and he chose Purbasari as his successor. Purbalarang and the other sisters became very jealous and planned to get rid of Purbasari. They ordered the *Lengser,* a servant at the court, to take Purbasari into the forest and kill her. But the *Lengser,* a kind old man, instead killed a deer and brought its heart to Purbalarang as proof that he had carried out her command. Purbasari continued to live in the forest. A god who had changed himself into a *lutung (a kind of ape)* to succour people who had suffered at the hands of the wicked Purbalarang, wandering in the forest by chance, met Purbasari. He made a hut for her and each day brought her food. One day Purbalarang and her husband, who were ruling the kingdom, realised that Purbasari was alive and went to the forest, seized her, and ordered that she should be beheaded in the capital. But the *Lutung* followed her and created a violent storm that swept Purbasari away just as she was about to lose her head. At that moment the *Lutung* vanished and a handsome knight appeared, holding the skin of a black ape. The story ends with the knight marrying Purbasari.

This story is very popular with the people of West Java, who consider it sacred. But the group of performers can also play other stories, such as *Ciung Wanara, Nyai Lara Kidul, Abdullah Hasan* and *Kartina Kartini.*

The drama ends at about 4 a.m. Then *si Jantuk* comes on the stage, dances in a comic fashion and criticises village affairs. He cajoles money from the audience, dancing among them to pick it up.

The performance thus can be divided into four parts: the *talu;* the *dedogeran;* the main drama, and the epilogue (*si Jantuk*).

The figure of *si Jantuk* is, in fact, similar to the *Punakawan* of the *Wayang* stories. The *Punakawan* are a symbol of the genius of those peoples of whom *wayang* is the common heritage. They are regarded as sacred and play a *rôle* in philosophical thought, though they are beings who act as attendants for the *Pandawa,* among others.

The *Wayang* performance could be said to follow the same steps as the *Topeng* drama. In the *Topeng* drama, there is first the *talu,* where the *gamelan* is played to signify that the performance is about to start; second is the *jejeran,* where the *dalang* tells what is going to happen: there are some court scenes and fighting which take the play to the middle of the night. The fighting in this part is called *perang gagal,* and none of the fighters is killed; it is a light-hearted prelude to the real drama, similar to the *dedogeran* in the *Topeng* drama. The *Wayang* show of Yogyakarta, the *gara-gara,* where the *dalang* plays the *gunungan* wildly on the screen, is followed by the arrival of *Punakawan* on the screen. They joke with topical allusions. This ends when the knight (usually *Arjuna*) comes on stage and so indicates that a serious *lakon* (play) is about to start. The *gara-gara* does not exist in the *Wayang* of nearby Surakarta.

The *lakon* that follows the *gara-gara* continues till the end of the story. The performance is closed by a dance, by either a *golek* (wooden puppet) or a *Wayang-kulit* figure of Bhima (the second of the five *Pandawa),* or a *Wayang-kulit* figure of Petruk (one of the *Punakawan*). This is called *tayungan* and can be considered as the fourth part.

The comparison of both performances is complete. I have a strong feeling that other traditional performances follow the same pattern, except perhaps that in plays like *Lenong* and Ludruk the last part is missing. If the impression is right, the traditional dramas must be seen as a unity: they belong to one group. It is, however, possible that this *Topeng* drama has been influenced by, is based upon, or has the same meaning as elements belonging to other groups — for example, erotic Javanese dances such as *Janggrungan,* and *Gambyong* and the like. These dances express a very close and clear connection with the worship of the goddess of fertility, common in agricultural communities.

Wahyono M. has been associated with a number of Indonesian Museums of note.

(The author wishes to express gratitude to Miss Jeune Scott-Kemball, who gave him help in English expression.)

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The title is quoted from Sir James Malcolm, who described one of his Turcoman acquaintances as 'a rude but intelligent barbarian'.

'RUDE BUTINT

ABOVE: Turcomans, an engraving from Narrative of a Mission to Bokhara *by the Rev. J. Wolff, 1845. (Courtesy National Library of Australia). BELOW: Detail of a wall-painting at Bezeklik in Eastern Turkestan, showing Uighur Princes. (Photograph courtesy Museum für Indische Kunst, Berlin).*

THE TURKS become known to us by name only from the middle of the sixth century A.D. when a nomad people called by the Chinese T'u-chüeh (a transcription of the native Türk) descended from the Altai mountains to make themselves masters of what is today the Mongolian People's Republic. Their empire lasted for nearly two centuries, though for fifty years (630-682) they were under the domination of the Chinese. We may read their history not only, as in the case of earlier steppe empires, in the Chinese annals, but also in their own records, the monuments raised over the graves of their rulers, the Orkhon inscriptions, so called from being situated for the most part along the upper reaches of the Orkhon river.

Among the various peoples mentioned in these inscriptions is a confederation called the Toquz Oghuz ('Nine Clans') or simply the Oghuz. Their relationship with the T'u-chüeh is not clear: they appear sometimes as their allies and sometimes as their enemies. One of the Nine Clans was the Uighur, who in 744 rose against the T'u-chüeh and succeeded them as the rulers of Mongolia: the ruins of their capital are still to be seen on the banks of the Orkhon at no great distance from those of Karakorum, to become the capital of the Mongols. The tenth-century Muslim geographers, when they refer to the Toquz Oghuz, mean in effect the steppe empire of the Uighur. When this empire was at its zenith, at the end of the eighth and the beginning of the ninth century, some of the Toquz Oghuz made their way westwards and established themselves on the shores of the Aral Sea, where they became known to the Byzantines as the Ouzoi and to the Muslims as the Ghuzz. These Oghuz or Ghuzz are the ancestors of all the various Turcoman peoples in the Middle East.

A description of the Oghuz in the period immediately preceding their conversion to Islam is given in the anonymous tenth-century Persian

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BUT INTELLIGENT'?

Andrew Boyle

Professor J. A. Boyle is Head of the Department of Persian Studies at the University of Manchester.

geography known as the *Hudud al-'Alam* or 'Regions of the World'. The Ghuzz, we are told, 'have arrogant faces and are quarrelsome, malicious and malevolent. Both in summer and winter they wander along their pasture-lands and grazing-grounds. Their wealth is in horses, cows, sheep, arms and game in small quantities ... (They) greatly esteem the physicians [by which must be meant their shamans] and, whenever they see them, venerate them, and those doctors have command over their lives and property . . . They continually make inroads into the lands of Islam, whatever place be on the way, and (then) strike, plunder, and retreat as quickly as possible. Each of their tribes has a (separate) chief on account of their discords with each other.'

The Byzantine chronicles supply some details of the history of these heathen Oghuz. Their arrival in the steppes around the Aral Sea started a chain reaction similar to that in the English folk-tale about the Old Woman and her Pig: '. . . the cat began to kill the rat; the rat began to gnaw the rope; the rope began to hang the butcher . . .' They ousted the Pechenegs (themselves originally an Oghuz tribe) from their territories between the Emba and the Ural in the present-day West Kazakhstan; the Pechenegs in turn, about 850-860, drove the Magyars (i.e., Hungarians) from the northern shores of the Sea of Azov westwards into the region between the Dnieper and the Lower Danube (i.e., the modern Ukraine). Resuming their attack between 889 and 893, the Pechenegs drove the Hungarians from this area also, and at the end of the ninth century they occupied the country to which they gave their name and, until their conversion to Christianity a century later, were as great a menace to Western Europe as the Huns or Avars before them.

No mention of these movements of peoples is made in the various recensions of the *Oghuz-nama* or 'Book of Oghuz', a history of the eponymous ancestor of the Oghuz Turks. This is a curious work, reminiscent of Geoffrey of Monmouth's *History of the Kings of Britain*, in which Oghuz's purely mythical adventures are inter-

(Ginette Laborde, Paris)

ABOVE: Aerial view of desert vegetation surrounding a small village in Uzbekistan. BELOW: Another detail of the wall-painting at Bezeklik in Eastern Turkestan, showing Uighur Princesses. (Courtesy Museum für Indische Kunst, Berlin).

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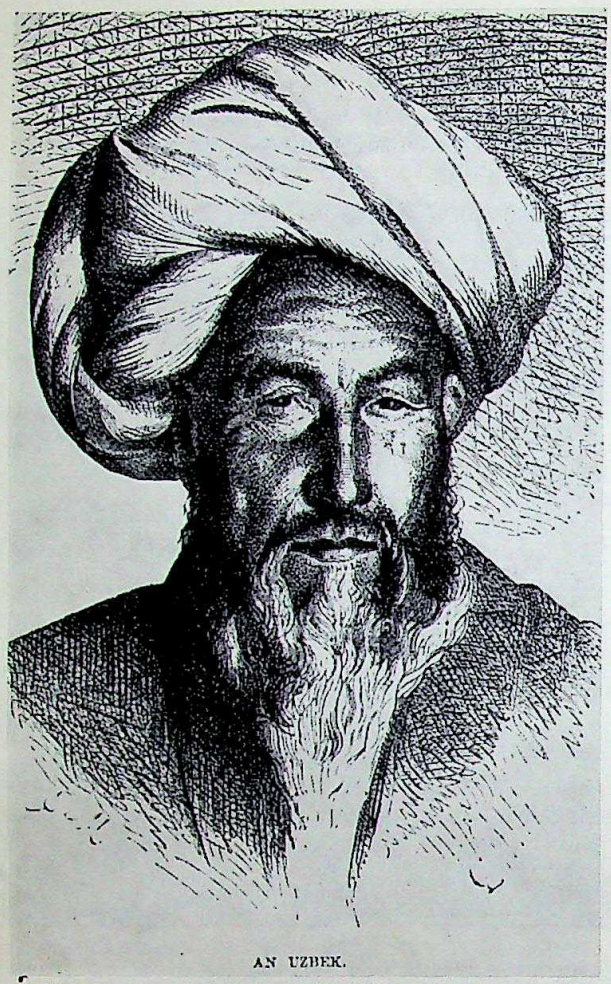

AN UZBEK.

A Uzbek, reproduced from Turkestan, *by E. Schuyler, London, 1876.*

TURKOMAUN LADY.

A Turcoman lady, reproduced from Narrative of a Mission to Bokhara *(Rev. J. Wolff, 1845).*

mingled with a garbled account of the Seljuq (and even the Mongol) campaigns in Western Asia. The new-born Oghuz is represented as refusing his mother's milk until she became a Muslim and as becoming involved, as he grew up, in hostilities with his pagan kinsmen.

In this legendary Oghuz we can perhaps detect a reflection of the historical or semi-historical Saljuq (Seljuq), the ancestor of the Seljuq Turks. At some time before 985 Saljuq separated from the rest of the Oghuz and settled with his clan on the right bank of the Lower Syr Darya near the present-day Kzyl-Orda in southern Kazakhstan. Here he and his followers abandoned the shamanism of their ancestors and became converts to Islam; and they and other Oghuz converts are known henceforth as Türkmen (Turcomans), a name which has never been satisfactorily explained but which seems to mean something like 'Turk *pur sang*'. By 985 the Seljuqs, as we may now call them, had moved southwards to pitch their tents and tend their flocks in the vicinity of Bokhara in the present-day Soviet Socialist Republic of Uzbekistan. About 1029 Saljuq's son, Isra'il, became the ally of the local Turkish dynasty against Sultain Mahmud of Ghazna, famous for his repeated invasions of India. Mahmud captured Isra'il and held him prisoner till his death, an action for which Mahmud's successors were to pay dearly.

The Seljuq tribesmen had now moved further westwards and were encamped along what is today the border between Persia and Turkmenistan. Sultan Mahmud is said to have given his consent to this migration against the advice of the local governor, who recommended that Mahmud's men should 'cut off the thumbs of every one of them whom they could catch, so that they should be unable to use the bow, wherein lay their special skill'. In 1038 Isra'il's nephew Toghril was declared king at Merv and shortly afterwards at Nishapur.

Two years later, with his decisive victory over Mas'ud, Mahmud's son and successor, near the fortress of Dandanqan, some sixty-five kilometres from Merv, the whole region to the west of Oxus passed into Seljuq hands, and the road lay open to central and western Persia and what is now Iraq. In 1022 Toghril made a triumphal entry into Baghdad, where he was fêted by the Caliph as the victor over the Buyids, an heretical Persian dynasty who had long imposed their will upon the Caliphate. Toghril's nephew and successor, Alp-Arslan (1063-72), is famous above all for his victory over the Byzantines at Mantzikert (1071) in a decisive battle which gave the Seljuqs

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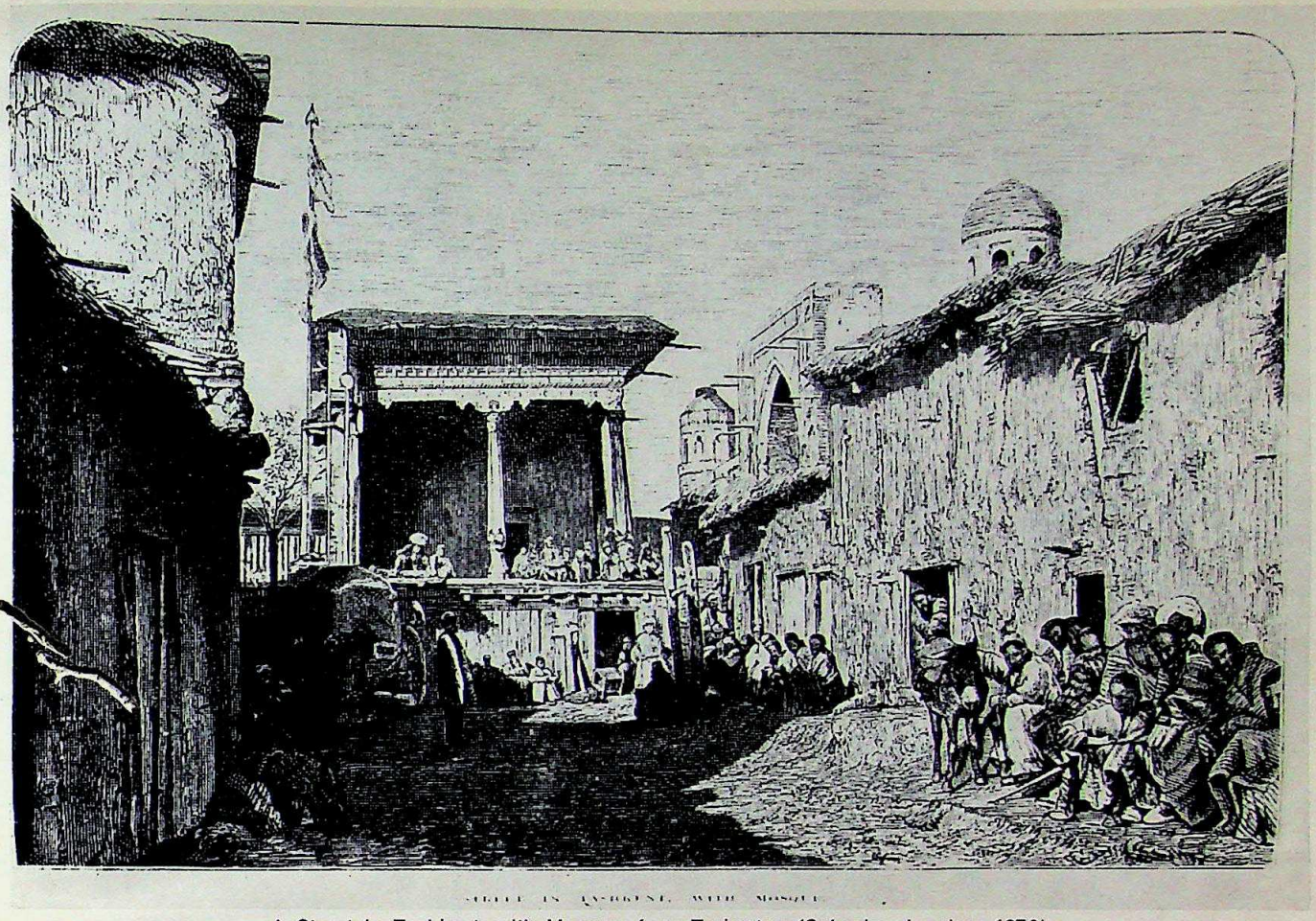

A Street in Tashkent, with Mosque, *from* Turkestan *(Schuyler, London, 1876).*

possession of Asia Minor, where they laid the foundations of what was afterwards the Ottoman Empire and is today the Turkish Republic.

The Seljuq Empire reached its apogee under Alp-Arslan's son, Malik-Shah (1072-92), of whom we read that the boatmen who ferried him and his troops across the Oxus were paid by his vizier, the celebrated Nizam al-Mulk, in drafts on Antioch, 'in order that they might realise the immense extent of their sovereign's dominions'. Malik-Shah's reign was distinguished by the reformation of the Persian calendar, an undertaking in which the famous astronomer Omar Khayyam, better known in the West as a poet, played a prominent part. The Maliki or Jalali era—Malik-Shah bore the honorific title of Jalal al-Din—was described by the English historian, Edward Gibbon, as 'a computation of time, which surpasses the Julian, and approaches the accuracy of the Gregorian style'. In point of fact, the Jalali Calendar was *more* accurate than the Gregorian, although five hundred years earlier.

The last of the Great Seljuqs was Malik-Shah's son, Sanjar, who reigned from 1117 to 1157. The last years of this long and prosperous reign were troubled by the rebellion of a Turcoman tribe referred to by the old name of Ghuzz, whose pasture-land lay in what is today Tajikistan. An attempt to raise their annual tribute at twenty-four thousand sheep to thirty thousand, coupled with the harsh behaviour of Sanjar's officials, was the cause of this revolt, to suppress which the aged Sanjar took the field in person: his army was defeated and he himself brought in chains to his own capital of Merv, which the Ghuzz pillaged for three days. From Merv they advanced on Nishapur, where they carried out such a massacre in the Great Mosque that 'the slain could not be seen for the blood wherein they lay'.

The Ghuzz held Sanjar prisoner for three years, 'setting him', as the Persian historian Juvaini tells us, 'by day upon a royal throne and keeping him at night in an iron cage'. Two hundred and fifty years later, the Ottoman Sultan Bayezid was said to have suffered a similar fate after his defeat by Tamerlane in the Battle of Angora; but the story, rejected already in the time of Gibbon, seems to be based on a misunderstanding of a flowery passage in an Arab historian of Tamerlane. Unlike Bayezid, Sanjar succeeded in escaping from his captivity, but only to die soon afterwards of grief at the desolation by the Ghuzz of his favourite province of Khorasan.

After Sanjar's death the greater part of the Seljuq lands

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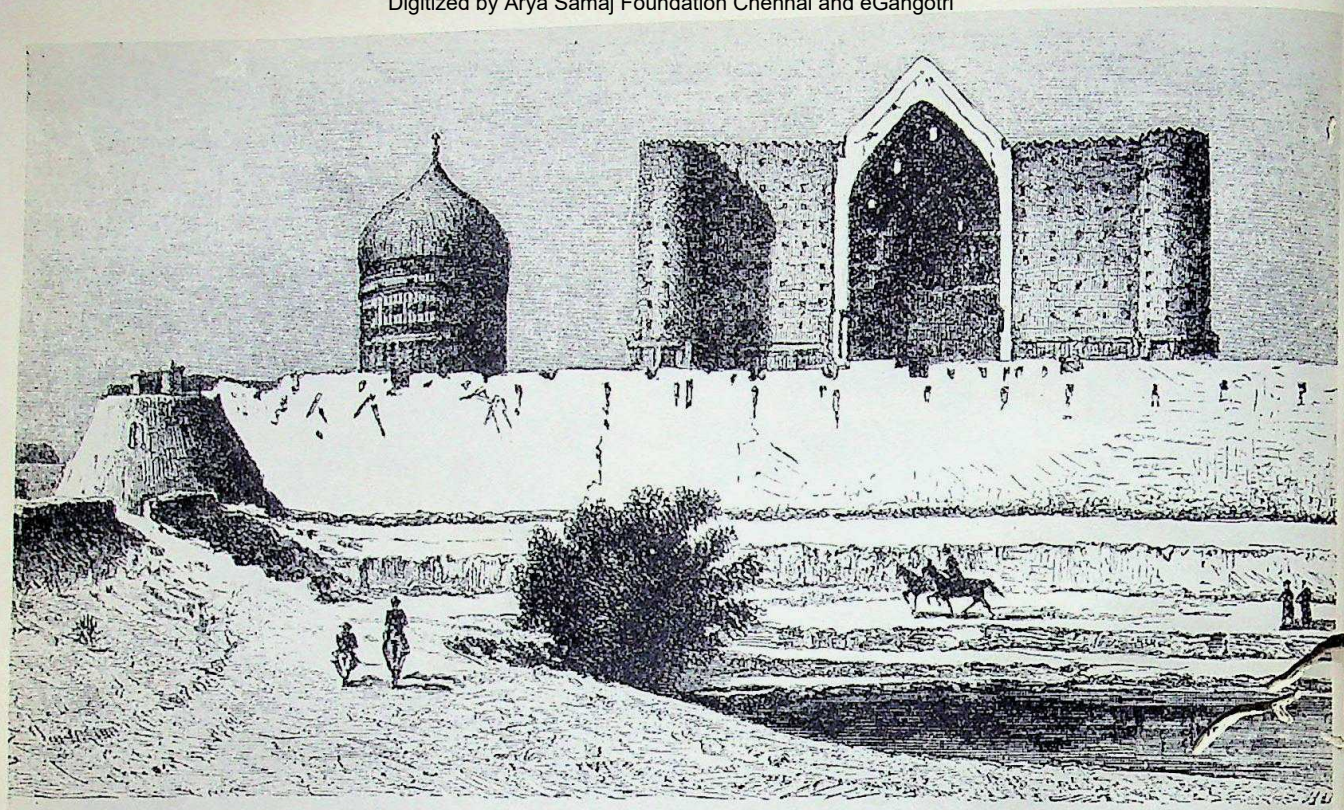

THE MOSQUE HAZRET AT TURKISTAN.

The Mosque Hazret at Turkestan, from Turkestan.

passed into the hands of various successor states and were finally incorporated in the short-lived empire of Muhammed Khwarazm-Shah, the ruler of Khwarazm or Khiva, which was overrun by the Mongol invaders in the second decade of the thirteenth century. In Asia Minor a branch of the Seljuqs continued to rule, but only as the vassals of the Mongols; the dynasty became extinct at the beginning of the fourteenth century, shortly before the collapse of their masters, the Il-Khans or Mongol rulers of Persia. Their place was taken by the Ottomans, themselves a Turcoman tribe driven westwards by the impetus of the Mongol invasions.

When, at the beginning of 1258, the Mongol armies were closing in on Baghdad, the Caliph's commander-in-chief was a Turcoman called Sulaiman-Shah, the leader of a branch of the Turcomans known as Ive, already then established in Azerbaijan, where to this day Turkish is still the normal speech of the people. Sulaiman-Shah, like the Caliph, perished at the hands of the Mongols; but it has been plausibly suggested that his followers, the Ive Turcomans, emerging from obscurity after the collapse of the Mongol dynasty to form the nucleus of the Turkish federation known as the Qara-Qoyunlu ('Those of the Black Sheep'), which, along with the rival federation known as the Aq-Qoyunlu ('Those of the White Sheep'), was to dominate eastern Turkey and western Persia throughout the fifteenth century. The Qara-Qoyunlu had their headquarters on the Armenian plateau to the north-east of Lake Van, while the Aq-Qoyunlu occupied the region between Diyarbakir and Mardin in present-day Turkey.

In 1410 the Qara-Qoyunlu Qara Yusuf defeated and put to death his old master, Sultan Ahmad, the last of the epigone Mongol dynasty of the Jalayirs, and so achieved the position of an independent ruler with his capital at Tabiz; he and his sons were in a state of constant warfare with the Timurid rulers of eastern Persia. His second son, Jahān-Shah (1437-67), a patron of the arts who built the famous Blue Mosque in Tabriz, was killed during an expedition against Uzun Hasan, or 'Hasan the Tall' (1453-78), of the Aq-Qoyunlu, who now possessed themselves of their rivals' territory. Two great victories over the Timurids placed the whole of Persia in Uzun Hasan's grasp and, encouraged by the Venetians, he was meditating an attack on Constantinople, then only recently captured by the Ottomans. Had this scheme been realised, the Ottoman Empire might, for a while at least, have been superseded by a Turcoman Empire stretching from the Bosphorus to the confines of Central Asia. However, he was decisively defeated by the Ottomans in a battle fought near Trebizond in 1474, and soon not only Turkey but Persia also was lost to the Aq-Qoyunlu with the rise, at the beginning of the sixteenth century, of the national dynasty of the Safavids.

Curiously enough, these Turks played a major part in the creation of a national Persian state. Shah Isma'il

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The Emir's Council, from Narrative of a Mission to Bokhara.

(1501-24), the founder of the Safavid dynasty, drew his following largely from the now leaderless Qara-Qoyunlu and Aq-Qoyunlu, who became a sort of Praetorian guard known as Qizil Bash, 'Redheads', from the red caps they wore, or Shahi Seven, 'Lovers of the King', from their devotion to the ruler in whom they saw incarnation of 'Ali, the cousin of the Prophet Mohammed and, in the eyes of the Shiites, his only rightful successor.

Shiism now became the national religion of Persia and, in the opinion of the late Professor Minorsky, it was by this differentiation from her neighbours that Persia preserved her nationhood. Threatened from the west by the Ottomans and from the north-east by the Uzbeks, Persia might 'have ended by being submerged in these waves of Turkish assaults. The new religion with its ecstatic character helped to consolidate the central power, and, on the other hand, the new doctrine, which in itself had no connection with Persian nationality provided the platform upon which the Persian people could maintain its rights against absorption into an abstract Islam and in practice, into the Turkish ocean'. It is strange that Persia should have been saved from being Turkicised largely through the instrumentality of the Turkish-speaking Qizil Bash or Shahi Seven. But, indeed, the phenomenon is not without parallels elsewhere.

On the foundations laid by Isma'il and consolidated by his great grandson, 'Abbas the Great (1581-1629), perhaps the most famous of all Persian kings, the Safavid dynasty was able to survive in peace and prosperity until its overthrow by the Afghans in 1722, nearly a hundred years after 'Abbas's death.

Persia was delivered from Afghan rule by a member of the Turcoman tribe known as Afshar, one of the Shahi Seven tribes that rallied around Shah Isma'il. This deliverer was none other than the famous Nadir Shah, whose victories in India, Central Asia and Iraq restored to Persia for a while the frontiers she had held under the Archaemenids. At the start of his career Nadir had frustrated the ambitions of another Shahi Seven tribe, the Qajar of Astarabad in the north-eastern corner of the Caspian Sea. At the end of the eighteenth century the Qajar chieftain Aqa Muhammad Khan, a cruel but able man, founded the dynasty which was to witness the emergence of Persia as a modern state and which survived until as recently as 1926.

Throughout all these centuries the greater part of the Turcomans had continued to lead their nomadic way of life in the area that is now called after them the Soviet Socialist Republic of Turkmenistan, and in the adjoining border regions of Persia and Afghanistan. Exactly in the manner of their ancestors described in the tenth-century *Hudud al-'Alam,* they used to make annual raids deep into Persian territory. Readers of Morier's classic *Adventures of Hajji Baba of Isfahan* will remember how his hero, captured by such a band of freebooters, was carried off to their encampment beyond the Atrek, and how, after a

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year of captivity among them, he accompanied these Turcomans in a raid across the Salt Desert upon his native town. Sir John Malcolm in his *Sketches of Persia* tells of similar raids on the Kashan area. Both he and Morier were writing about conditions at the beginning of the nineteenth century, but Curzon, who visited Persia in the 1880s, could still speak of the Turcomans' 'habit of swooping down upon the defenceless and terror-stricken caravans'.

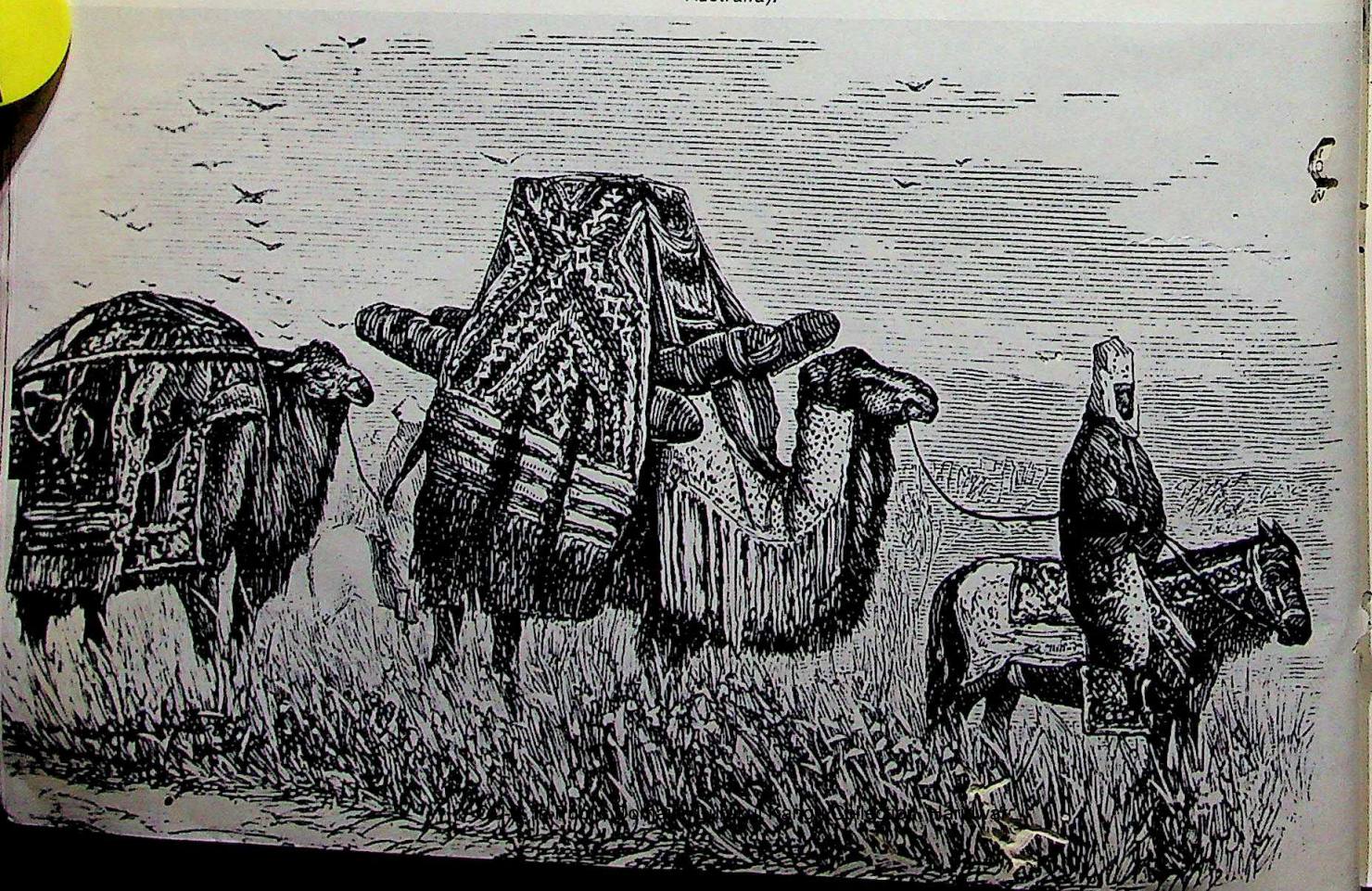
During his visit to Tehran in 1800, Malcolm saw a great deal of the Turcomans and gathered information about their history from one Rahman Beg, whom he describes as a 'rude but intelligent barbarian'. Rahman was familiar with the legend of Oghuz, the mythical ancestor of the Turcomans, and also knew the story of their capture of Sultan Sanjar. His remarks on the policy of the Qajars towards their fellow Turcomans are extremely interesting:

> The tribe of Yamoot . . ., to which I belong, remained long unsubdued, and made famous annual inroads into Persia; but the late king Aga Mahomed Khan, who was a cruel, wily old rogue, spoiled all that sport. Being well acquainted with our haunts, he made a sudden incursion into our country, slew numbers, and brought away many captives, the majority of whom were women and children. The possession of our familiies compelled our chiefs to enter into a compact not to plunder, and they have been obliged to give their children as hostages for its faithful performance. The present king [Fath 'Ali Shah] has improved upon the policy of his uncle: a colony of our tribe is established at Teheran; some are in service, and the others, though strictly watched, are permitted to trade. If matters go on in this way our sons will become a set of blackguard horse-dealers, instead of gallant warriors, and their children will be instructed in the art of cheating unwary citizens, instead of the more manly occupation of plundering a rich traveller. We shall have no more fine Persian girls to keep our tents clean, and dress our victuals, nor active fellows to rub our horses, or attend our flocks! What a sad change! And as to our profits in breeding and selling horses, I have known more money given in one day for the ransom of a nobleman or a wealthy merchant than our whole tribe can now make by trafficking in cattle for a twelve-month!

Rahman Beg's tribe, the Yomut, rose against the Qajars for the last time in 1889 in a great insurrection which, like the rebellion of their ancestors against Sultan Sanjar, was due to the inconsiderate behaviour of local officials. The Yomut and their rivals, the Göklen, are today to be found to the south of the Atrek on the north-eastern corner of the Caspian, both tribes being now cultivators, though the Yomut are still to some extent nomadic.

These Persian Turcomans were the subject of an exhibition held in England on the occasion of the two-fifth centenary of the foundation of the Persian Empire by Cyrus the Great. In examining their belongings it was possible to form some idea, however incomplete, of the way of life of the T'u-chüeh, the Huns, the Sarmatians, the Scythians and, perhaps, our own Indo-European ancestors in still remoter times.

A Kirghiz tribesman changing camp, from Turkestan. *(All black and white photographs by courtesy of the National Library of Australia).*



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(Camera Press, London)

Schoolchildren in Hong Kong — an over-crowded area in which loneliness can be a luxury.

'CLOSE-WRAPT SOULS'

Geoffrey Caldwell

(A Lecturer in the Centre for Continuing Education, Australian National University.)

AN ABSURDITY about modern Western society is that, while it is obsessed with mass communication and the storage and dissemination of information, it shows comparatively minor social concern for personal communication. Great financial and human resources are devoted to technological communication. We are moving hell-bent into a communicative age with computers which will enable us to juggle mountains of previously unmanageable data.

The neglect of significant inter-personal communication is little short of tragic — because it is this inter-personal communication that makes life worth living. Despite all the technological sophistication, many human beings still seem afraid to communicate to others their feelings, ideas and emotions.

The inability of people to communicate with one another at a deep personal level leads to massive loneliness. This loneliness is pervasive throughout the society — its evidence is everywhere, even among educated people, even among individuals who mix freely. At dinner parties, conversations are largely devoted to verbal games (where the quick-witted can demonstrate

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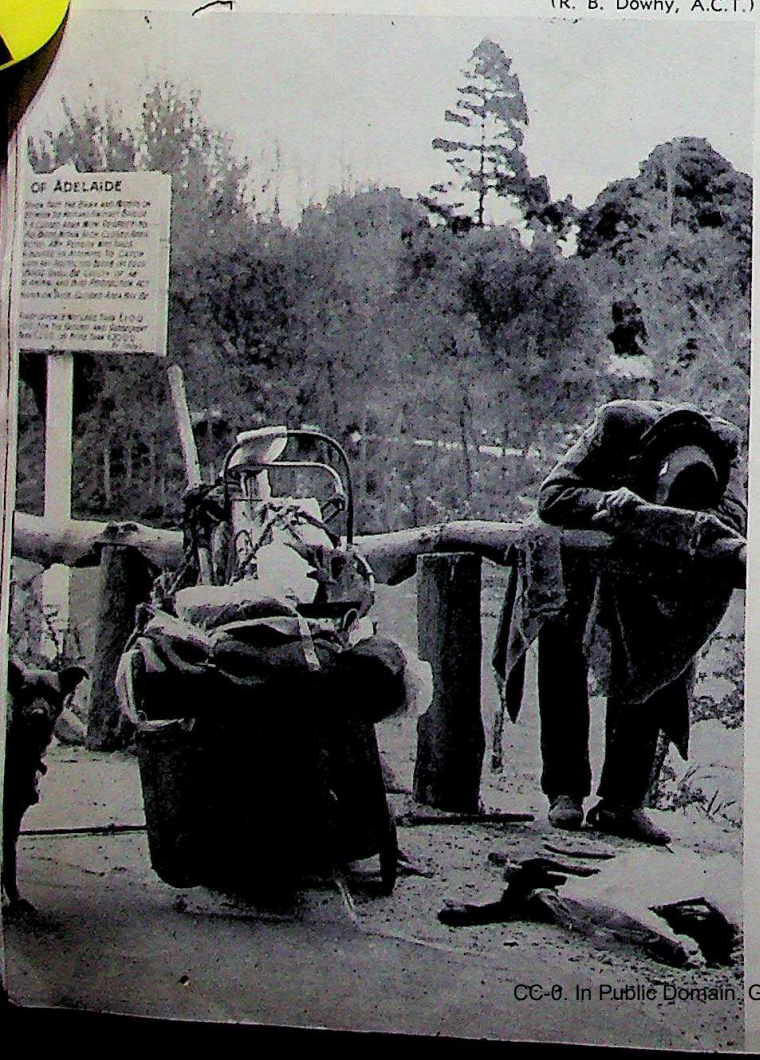
their cleverness), discussions of the qualities of wines in which middle-class people can reveal their affluence and superior knowledge), or discussion of the latest materialist bargain (for example, where one can obtain the largest discount or take advantage of the smartest 'lurk'). But rarely do conversations turn to the significant questions about people's anxieties, fears and hopes. Individuals shy away from speaking about these personal matters. The absorptions with verbal games, wines and material matters are defence mechanisms which permit the individual to remain untouched and unthreatened. The other side of this coin is isolation and loneliness.

Perhaps more serious evidence can be located in the vast number of Australian marriages that are disintegrating. This suggests a disturbing phenomenon — the presence of a vast loneliness and a yearning for much more significant relationships than current or former marriages have been able to provide.

It is not easy to pluck forth statistical facts that show with unarguable precision the widespread experience of loneliness. Nevertheless, let me try to show why loneliness will continue to be a major Australian social problem unless we begin to change our ways.

First, many Australians, especially men, don't know, haven't experienced what emotional intimacy is like.

The loneliness of the swagman, the Australian wanderer.
(R. B. Dowhy, A.C.T.)



Such intimacy represents, for me, the opposite to loneliness.

Essentially, this intimacy is the sharing of thoughts and emotions with another person without censoring thoughts or feelings. There is an easy flow that develops betwen two persons that is almost unconscious. Not only is there no wish to stop this flow, but there is a positive desire to share and exchange spontaneous, deeply felt ideas and feelings.

This intimacy is that experience which helps us understand what others are about, and what sort of individuals we are ourselves. In the various expressions and experience of intimacy we begin to know the commonness we have with others, and some of the differences that make us, as individuals, unique. One's identity emerges more clearly through the process of intimacy — and it binds us to other people and eliminates the empty, uncared for, unwanted feelings that we call loneliness.

Why is there this apparently widespread Australian refusal to be intimate, leading to almost ubiquitous loneliness? Historically, while mateship was a male intimacy that warded off loneliness and created interdependence, the rural conditions that give birth to mateship have long since passed.

But with the passing of mateship, there has not been the logical substitute of male/female intimacy. The reasons can be found first in the differing ways that males and females have been brought up in Australia. Boys are encouraged to be tough, brave, aggressive ('naughty') and independent. At no time should a boy display weak characteristics, such as crying — for he must act like a 'man'. On the other hand, it is considered in the nature of things for girls to cry, be good, helpful, gentle and submissive. Girls need to be protected — if they're to be protected, they must tell others (usually mother, sometimes father) what their troubles are.

The fear of displaying weakness makes Australian men reluctant to expose their innermost thoughts; as a result, they are usually unable to experience intimacy. The socialisation of girls, however, demands no such strong, unwavering self-reliance — and they are much freer to share their emotions. In fact, many women hunger for intimacy, recognising its life-sustaining and stimulating quality.

This gap between feminine needs for intimacy and masculine incapacity to share in it constitutes the major dysfunction in Australian male/female relationships.

One does not need much analytical skill to identify a further by-product of this loneliness syndrome. People, especially men, become emotional islands over the years, because they are largely untouched by others' emotions, having learnt to suppress their own. Australian culture has reinforced this emotional isolationism. In the work world, men have been required to be 'cool', tough and steady. Displays of anger, emotion, care, tenderness

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and seriousness have generally been taboo — partly because these are usually written off as feminine characteristics. The legitimate natural expression of emotions and feelings is rarely provided for in the daily intermix of people.

As a consequence, emotions become distorted or wither. Australian men often do not learn how to put themselves in the place of others — especially their wives or girl friends. They simply haven't learnt to forget themselves and imagine what it's like to be the other person, to understand and experience his or her point of view. Major arguments and drifting away occur between couples because of their inability to try to think through why the other person is upset, frustrated, sensitive or angry. Perhaps one of the hardest things to learn is to imagine how it is to be another person. Certainly, little training in *rôle*-playing goes on in schools or other social settings.

Apart from these socialisation factors, other reasons exist for people's reluctance to talk about their inner essence. The belief is commonly held that, if one reveals openly the nature of one's thinking, the listener or receiver may store that knowledge and use it to personal advantage at some future date. The fact that one gets desperate enough to need to talk about one's problems is, to many people, an admission of weakness.

Yet, very often we may be bored, repelled or made uncomfortable by the wish of another person to confide in us. In some cases, we've heard it all before; in others, we simply don't know what help or advice to offer, because we don't feel confident enough.

So far, I have focused on some of the social conditions that bring social isolation and loneliness. But what can be done to promote intimacy, the development of which will dissipate this aching loneliness?

I am convinced that the ability to be intimate is a process that is learnt over a fairly long period of time. It means taking risks, learning to trust others; and it involves having some confidence. The more successful one is in intimacy, the more confident one becomes.

Intimacy is a vital ingredient of one's mental health, and a measure of how human we are. I don't know whether or not I'm sane unless I can talk with others about the things that worry me, that excite and delight me, that create anxiety and fear. For instance, there have been at least two periods in my life when the prospect of death has continuously, over a space of months, pushed itself to the front of my consciousness. In my late twenties, that concern surfaced; and it resurfaced recently as I raced through my late thirties. Am I unique in this? Is this concern with mortality a cyclical thing experienced by me alone, or is it shared with

'The rural conditions that gave birth to mateship have long since passed'.

(Andrew Green, A.C.T.)

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many others? How will I know if I don't explore this with friends?

But I want to stress that I do not seek to be intimate with others primarily in order to check up on my own sanity. The exchange of ideas and experiences openly, without censorship, contributes to a situation where both people involved are enriched, grow in maturity and understanding, and are excited by becoming part of the other person.

Several important facts about intimacy must be stressed. The most important point is one that has been made throughout this article — that all of us need intimacy. I contend further that all of us need two or three intimate contacts. The tragedy is that some people drift throughout life without any intimate contact at all.

Intimacy usually requires several conditions for its achievement. First, those involved in the intimate relationship need to see each other regularly — and once a week or so is simply not enough. It's desirable in most cases for intimate persons to see each other nearly every day for an hour or more. There are, of course, those rare intimate relationships which, having been built up, but threatened by long-term separation, are renewable, almost instantly — despite the intervention of separation.

A second condition is that meeting times must be unstructured, so that the two people can explore those matters of deep concern without interruption, without routine.

Intimacy is time-consuming — but it is a precious use of time that is too often unpractised or unknown. What is also a matter of enormous import is that the daily routines of our lives allow only a few privileged individuals who have free space (both in time and place) to experience such intimacy.

Socially, we simply haven't given face-to-face intimacy — the only effective antidote to loneliness — the recognition that it needs. Face-to-face communication is potentially the most powerful and meaningful form of communication, because it can involve the whole range of senses — and other communication media normally call into play no more than two senses.

There are indications that a host of people (well, middle-class ones anyway) are not happy with the interpersonal barrenness of communication. Carl Rogers (1970) has said that in his judgement 'the most rapidly spreading *social* invention of the century and probably the most potent' is the small group situation variously known as the encounter group, T-Group, or sensitivity training. The purpose of such groups is to accelerate and broaden inter-personal communication. While they have become popular in Australia, this should be recognised as a first step, one experience of intimacy.

It might seem that, in these troubled economic times, it is absurd to talk about the luxury of intimacy while many people will be struggling to survive financially, because of unemployment and growing poverty. There is great force in this view. But, unless more people experience intimacy, the less people will care about others — especially those they don't know.

The title is from Australian Christopher Brennan's 'The Wanderer' cycle:

But first ye must travel the many ways, and your close-wrapt souls/must be blown thro' with the rain that comes from the homeless dark . . .

New housing in the distant suburbs of Canberra, the sameness enhancing the loneliness of the housewife.

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An East Indiaman off Dover, by Atkins. (Courtesy National Maritime Museum, London.)

'A STRANGE VANGUARD FOR CONQUERORS'

Robin Jeffrey

ANYONE who has stood on the yellow-washed walls of Fort St. George in Madras, pondered the red-brick solidity of the Writers' Buildings in Calcutta or clambered over the remains of other European outposts in Asia will have toyed with the question: what enabled the European trading companies ultimately to conquer the Asian princes with whom they came initially to trade?

In this recent book,* an American expert on British imperial history, Holden Furber, brings together a lifetime of his own research, supplemented by the work of dozens of other scholars, to trace the development of the European companies.

And implicit in it all is the feeling that the vital difference between the companies and the princes lay not so much in technical skill, patriotism or superior military organisation — not in brain, heart, sinew or steel — but in paper. Paper and the bureaucracies it fuelled — these were the foundations of the European empires, the critical edge which the merchant from the West had on the prince

* *Rival Empires of Trade in the Orient, 1600-1800,* by Holden Furber (Minneapolis: University of Minnesota Press/London: Oxford University Press, 1976); Europe and the World in the Age of Expansion, ed. by Boyd C. Shafer, vol. II, xix + 408 pp., maps, photos. ISBN 0 8166 0787 7.

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from Asia. That impressive imperial pile in Dalhousie Square, Calcutta, is after all called the Writers' Building. It was, too, as a 'writer' that Robert Clive, the doyen of clerks turned conquerors, came to India.

The cards were not stacked in favour of the three Dutch ships and a yacht that arrived off Bantam in western Java in June 1596 to trade for spices. Nor did the captains play the cards they had notably well. 'Outrageous behaviour' quickly angered local rulers and earned the ships a hostile reception up and down the coast of Java. One ship was burned; the rest limped back to Holland a year later. Out of two hundred and forty-nine men who set out, eighty-nine returned. However, the small cargo of spices 'sufficed to give a modest profit. Thus ended the first venture by a corporate organisation which can properly be called an East India company' *(Rival Empires of Trade in the Orient, 1600-1800,* p. 31). The expedition had been financed by the Company for Far Distant Lands, founded by Amsterdam merchants in 1594 with a capital of two hundred and ninety thousand guilders.

The representatives of the early companies were prepared to undergo considerable humiliation to obtain the commodities that would bring profit in Europe (p. 62). Indeed, the humiliation did not surprise them, for the domains of two outstanding contemporaries — one European, one Asian — scarcely bore comparison: Elizabeth of England ruled the southern half of a poor, cold island; Akbar the Mughal ruled an empire stretching from the borders of Persia to the Bay of Bengal. Particularly on the Indian subcontinent, the princely courts excelled anything Europe could offer. European merchants were not unduly perturbed at having occasionally to crawl.

Nor were the virtues of patriotism and loyalty, which later imperialists considered their trademark and monopoly, especially evident among the early servants of the European companies. On the contrary, they were men on the make. The English East India Company, for example, 'was cheated consistently by many of its servants in a variety of ways throughout its history' (p. 201), and Furber concludes that 'when patriotism and private profit

East India House, London; an engraving by J. C. Stadler after T. H. Shepherd.

(Courtesy British Library)

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confronted each other east of the Cape . . . , it was seldom that patriotism entirely prevailed . . . ' (p. 307).

An Asian prince, therefore, could buy or capture the European expert knowledge he might need. The case of Eustace de Lannoy, a Belgian, nicely illustrates the point. Lannoy was a soldier in the service of the Dutch company, but was taken prisoner in 1741 when Maharaja Martanda Varma of Travencore defeated the Dutch in a battle near Cape Comorin. For Lannoy there was no question of death before dishonour. He immediately enlisted himself under Martanda Varma, built a European-style infantry and artillery for Travancore and served the expanding state for more than thirty-five years until his death in 1777. His tomb, built by a grateful Maharaja, is still to be seen near the main road linking Trivandrum and Nagercoil.

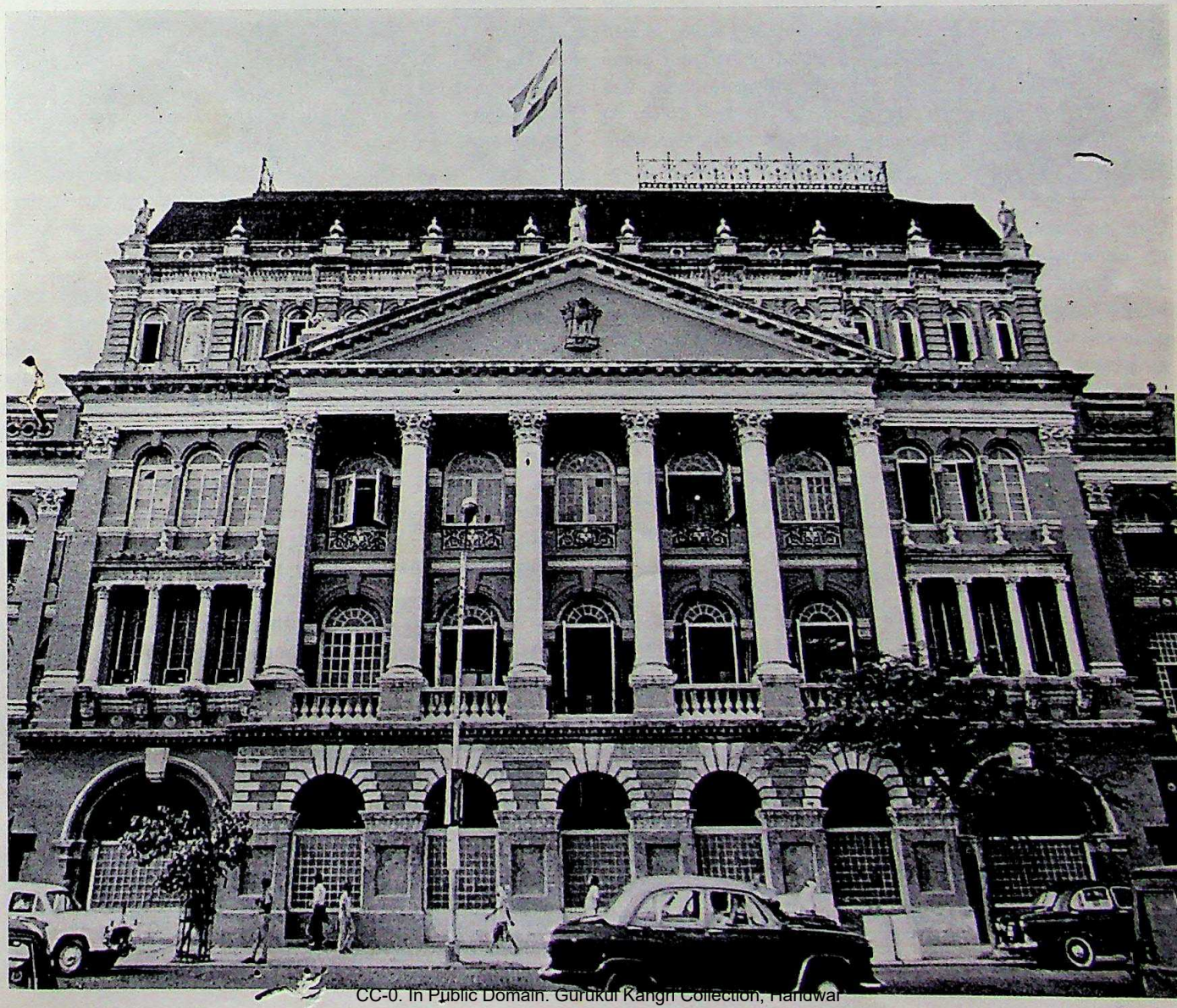
Lannoy's case was not exceptional. Asian princes had no difficulty, if they chose, in enrolling European experts to drill their soldiers. What was so often lacking, however, was the mechanism to pay the soldiers regularly once they were drilled and to maintain the cannons and the magazines once they were acquired. The strengths of the European companies, on the other hand, lay in such spheres.

And that brings one back to their paper-powered bureaucracies.

Initially, of course, the companies' records were for accounting purposes. A merchant needed to know what he had bought and how much he had paid. But record-keeping developed into reporting, and record-keepers became analysts and what would now be called 'intelligence men'. Knowledge was power. The fact that the companies' agents collected information, recorded it and passed it on to their successors and superiors began to give them advantages over the sufficient-unto-the-day governments of the Asian rulers.

As Furber notes, 'The chief difference between Asian and European diplomatic usage was that in Europe these two centuries saw the development of continuous diplomatic representation and the permanently established

Writers' Building, Calcutta. (Photograph by Sunil Dutt.)



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diplomatic corps. In contrast, Asia remained the world of temporary missions, each appointed ad hoc . . . ' p. 314).

In 1750, Europeans working at the Dutch factory at Surat on the north-western coast of India numbered a hundred and five, fifty-nine of whom were clerks. There were also two or three bookbinders (pp. 300-1).

Furber tells us that the secretariat of the Dutch company at Batavia was far more extensive than its counterpart in Holland. 'The paperwork produced by it at the height of the company's power and prosperity was so large that the ship which carried home the dispatches and annual reports was known as the 'book-ship' . . . Every subordinate factory from Mocha to Nagasaki was funneling in to Batavia a mass of correspondence which had to be digested by this secretariat' (p. 191).

It was not merely that the companies came to know more about the rulers than the rulers knew about the companies. The companies also had a chain of administration, a continuity, that preserved them from the wars of succession and the palace coups that weakened traditional rulers from within.

If the agent of a company died, another man was despatched to fill his slot, and the work of inferiors and superiors went on much as before. Kipling wrote it well in the 1880s: 'If you die another man takes your place and your office in the eight hours between death and burial' ('Thrown Away', *Plain Tales from the Hills).* In the case of a prince, however, the slot and the man were inseparable; when the man died, the slot disappeared, and other men fought to create it anew.

In contrast, their bureaucracies gave the companies an administrative stamina that the princes lacked. Yet one should not form a picture of would-be imperialists in the seventeenth and early eighteenth centuries poring over reports in efforts to find the weakest links within kingdoms they coveted. Like most bureaucracies, those of the companies were often self-serving and work-making. Of the reports compiled at Batavia, 'hundreds of pages sent home were never even read. Anyone working among the company's records in the Dutch National Archives is likely to open a volume to find thousands of grains of sand used to blot ink lying undisturbed between its pages' (p. 191).

Nevertheless, it was the joint-stock company and its attendant bureaucracy — the new ways of managing the affairs of men — that took the European companies to Asia and ensured their survival in the days when they moved largely as the petitioners of local princes.

It was not, of course, bureaucracies alone that paved the way for conquest. Indeed, the new forms of administration and organisation were to become an inseparable part of a more powerful phenomenon — the industrial revolution.

By the late eighteenth century that revolution in Britain was changing the nature of the Asian trade of the East India Company. Before 1760 the major item *imported* into Britain from Asia had been cotton cloths from India — calico. After 1760, however, the British textile industry, mechanised and growing, became able to duplicate the work of the hand-weavers of Asia (p. 235). After 1790, the tall-masted East Indiamen carried cotton cloth, woven in Britain from American fibre, *to* Asia.

If bureaucratic administration was one of the advantages the European companies shared over Asian princes, why did the British East India Company surpass all others in gaining political control? The answer, Furber believes, lies in timing. In the 1730s the Dutch were striving to dominate a number of Asian princes in a much more thorough way than ever before. But the industrial revolution in Europe, which was to give the British company so many technological and commercial advantages, had not yet taken off. The Dutch company's political and military ventures were costly failures, or still costlier successes, for which there were no compensations at home. By the 1760s, however, the industrial revolution in Britain was a fact; it came in time to support 'the rapidly increasing administrative and military costs of European conquest in Asia (p. 338). For what Blake called the 'dark, Satanic Mills' of Britain—provided the power to shake, and ultimately, uproot, pagoda trees.

Thus, by 1800 the situation had changed dramatically from what it had been in the seventeenth and early eighteenth centuries. The latter had been times 'when Europeans had lived among Asians, close to Asian ways of life, bound to Asians by many ties, . . . when European power was still largely the consequence of persuasion rather than entirely the consequence of superior force' (p. 329).

Viewed in one way, the factories of the early companies seem a strange vanguard for conquerors. One might have expected soldiers, and, indeed, they also came. But in the early days there were more writers, clerks, accountants and bookbinders than there were musketmen or grenadiers. And, at home, the proprietors and directors were more concerned with the state of the books than with military preparedness. 'Your Bombay journal leger [sic] . . . ', they wrote to Bombay on one occasion in 1720, 'are the worst and most eroneously [sic] copied that ever the Company received from any part of India. . . . If we had time to have copied them we would have sent them back to you to let you see what a shameful pair of books they are. Pray let the same persons copy us another pair' (p. 200).

Such considerations did not preoccupy the Asian rulers with whom the companies came to trade. The ledger was to prove a mighty complement to the sword.

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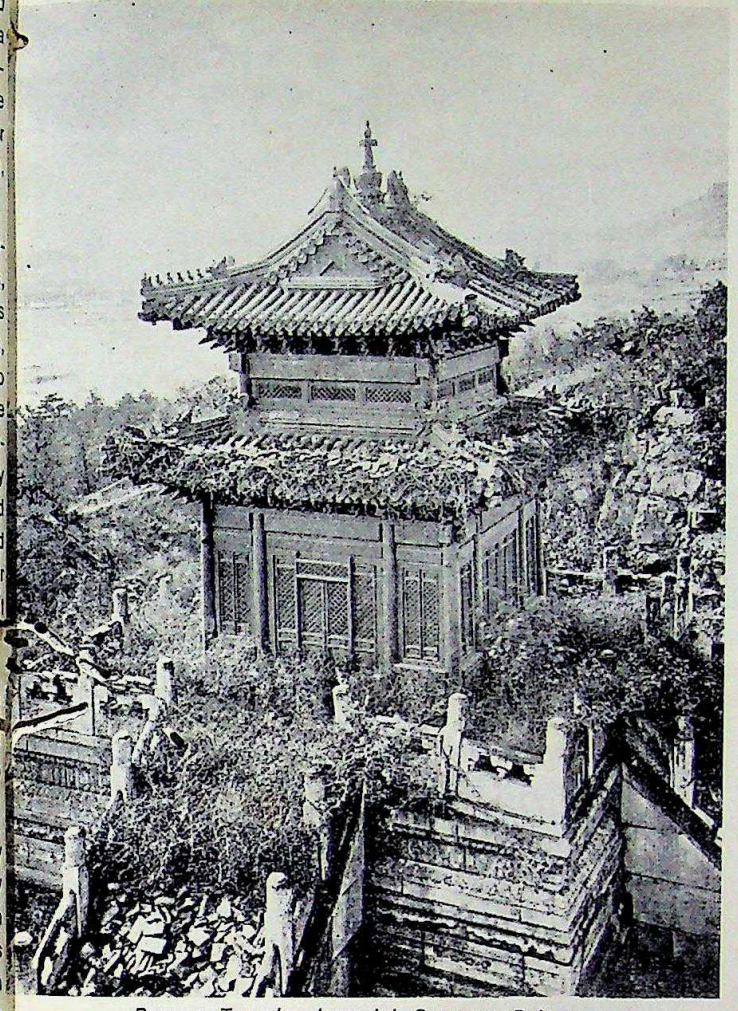

Bronze Temple, Imperial Summer Palace.

Boat-girls.

NO EGG-WHITES

John Warner

HAD the interior of China not remained closed to Western travellers for the first half of the nineteenth century, its photographic history would have begun earlier. Unlike India, which has a substantial photographic record dating from the early 1840s and where the first photographic society was established in 1864, China remained visually unrecorded except by the artist. Partly for this reason, the ambitious photographic record made by a Scot, John Thomson, was, and remains, of unique interest.

Thomson was not the first on the scene. With Commodore Perry's squadron on its visit to East Asia between 1852 and 1854 there were two daguerreotypists, E. Brown Jr., and Draper. Their photographs are now lost, but it is clear from the lithographs that were made from their work (in the *Narrative of the Expedition to the China Seas and Japan,* published in 1856) that they seldom ventured far inland. The earliest surviving photographs from China are in the form of small (about six and a half to nine millimetres) albumen prints mounted on cards, usually depicting occupations of the Chinese, and generally very uninspired.

Felice Beato, who had made his reputation in the mid-1850s photographing the Crimean War (with Roger Fenton), was among the first photographers to penetrate into China. Unfortunately, he was more concerned with capturing newsworthy moments of violence in Peking during the Franco-British wars with China of 1857-60 to leave us any more general record of the country. He, too,

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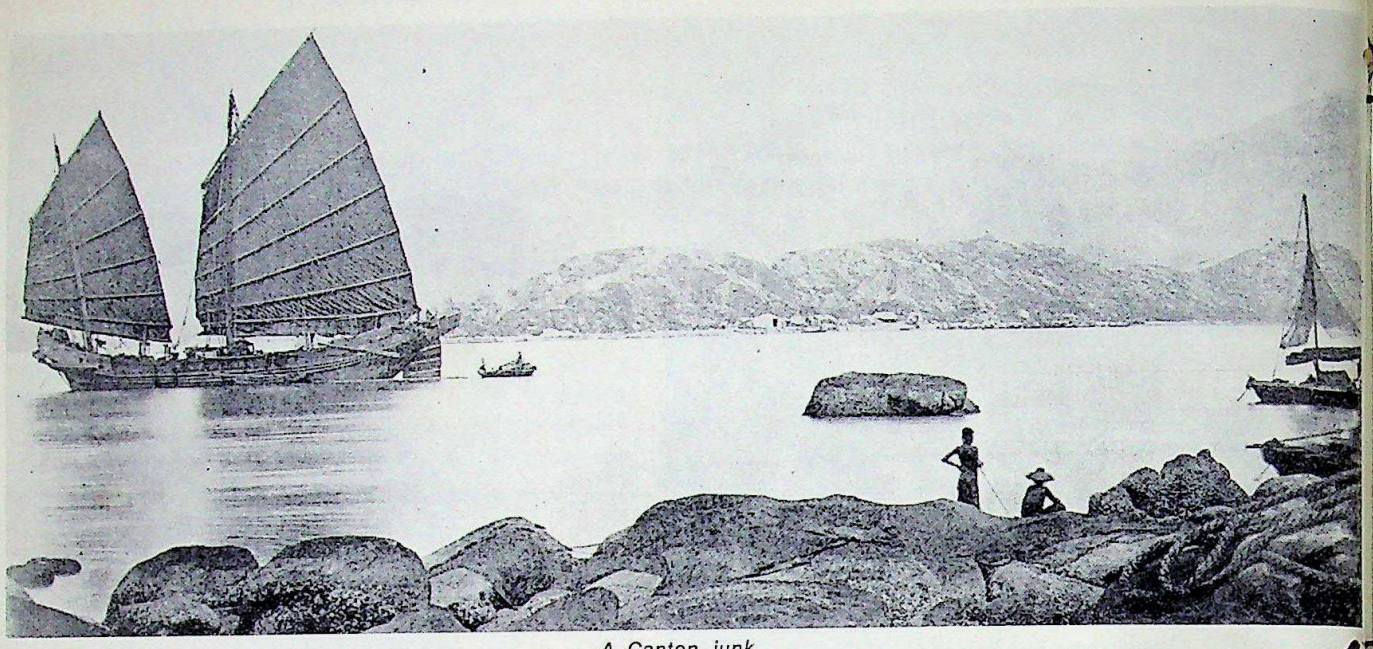

A Canton junk.

probably did not travel far afield, for his photographic process required, among other things, the preparation of a light-sensitive emulsion using fresh egg whites and the coating of the glass plate with this emulsion immediately before exposure.

By the time John Thomson arrived in China in 1865, photography had become one degree less arduous and the photographer one degree more mobile with the development of the collodion-on-glass process, which eliminated the egg whites. Thomson was one of several photographers who learnt the process in Edinburgh, where he was born in 1837. In this early centre of photography, David Octavius Hill and Robert Adamson practised Henry Fox Talbot's calotype process, invented in 1840. The development of the latent image of the negative with gallo-nitrate of silver dramatically reduced exposure times, and it now became possible for photographers to work outside their studios. Hill and Adamson grasped the significance of the new process, producing portraits of people in all walks of life which are remarkable for their spontaneity and naturalism.

John Thomson inherited his compatriots' gifts for both portraits and landscape, although it was as an architectural photographer, with his illustrations for Cuthber

Left to right: Physic St., Canton; Prince Kung, son of the Emperor Tao Kwang (1820-1850); the lady's maid, a slave; the cangue an instrument of punishment for petty crimes; a city guard, Peking.

...rukul Kangri Co... ...dwar...

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Bede's *Visitors' Handbook to Rosslyn and Hawthornden,* published in 1865, that he first gained recognition. However, his work in China and later in London established him as a social commentator with a discerning eye for the compelling image.

The result of Thomson's 'ten years' travels, adventures and residence abroad', most of which were in China (where he covered about nine thousand kilometres), was published in 1872 as *Illustrations of China and Its People.* It contains two hundred and eighteen photographs and a long, informative text.

In the introduction to this work Thomson states his aim with disarming simplicity: to convey an accurate impression of the country as well as 'the arts, usages and manners which prevail in different provinces of the Empire'. He regarded it as a novel experiment to attempt to illustrate a book of travels with photographs, and he sees fit to justify this 'for the faithfulness of such pictures affords the nearest approach that can be made towards placing the reader actually before the scene which is represented'.

The chronological order of the book does not follow the actual journey which Thomson undertook with his 'retinue of 8-10 bearers of evil reputation and difficult to manage'. *Illustrations of China and Its People* begins in Hong Kong (where Thomson was the 'official' photographer recording the Duke of Edinburgh's visit in 1869), and Macau and Canton follow. Before exploring the mainland of China, he deals with Taiwan and from there the journey proceeds to Swatow and Chow Chow Fu, and further north, he deals with Amoy and Fukien province and the foreign settlement at Shanghai. Moving inland from Ningpo the journey continues to Nanking and the Upper Yangtze, and on the way Peking, Chefoo and Tientsin. After being guided through the Nankow Pass the journey ends at the Great Wall.

It was not an easy journey for Thomson, for he was quickly and continuously to encounter deep-rooted suspicion and conservatism. He was the first 'pale-faced stranger' that many of the people had ever seen, and their natural apprehension had been distorted by the literati of the time, who spread the notion that the 'Foreign Devil' was to be feared for his ocular powers and purely selfish interests.

Thomson therefore 'frequently enjoyed the reputation of being a dangerous geomancer, and my camera was held to be a dark mysterious instrument which, combined with my naturally or supernaturally intensified eyesight, gave me the power to produce miraculous pictures by some black art, which at the same time bereft the individual of so much of the principle of life as to render his death a certainty within a very short period of years'. It is not surprising that he found portraits of children difficult to obtain. But, as he amusingly points out, 'in a land where filial piety is esteemed the highest virtue, sons and daughters brought their aged parents to be placed before the foreigner's silent and mysterious instrument of destruction'.

Against this background, it is not surprising that Thomson was stoned and roughly handled on several occasions during his travels. But apparently this mistrust was more widespread in towns and cities than it was in the country districts. Here he experienced kindness and hospitality as 'genuine as could be shown to a stranger in any part of the world'.

Studying the photographs more than a century after they were taken, we are struck by the fact that, in spite of the difficulties of travel in China and the clumsy

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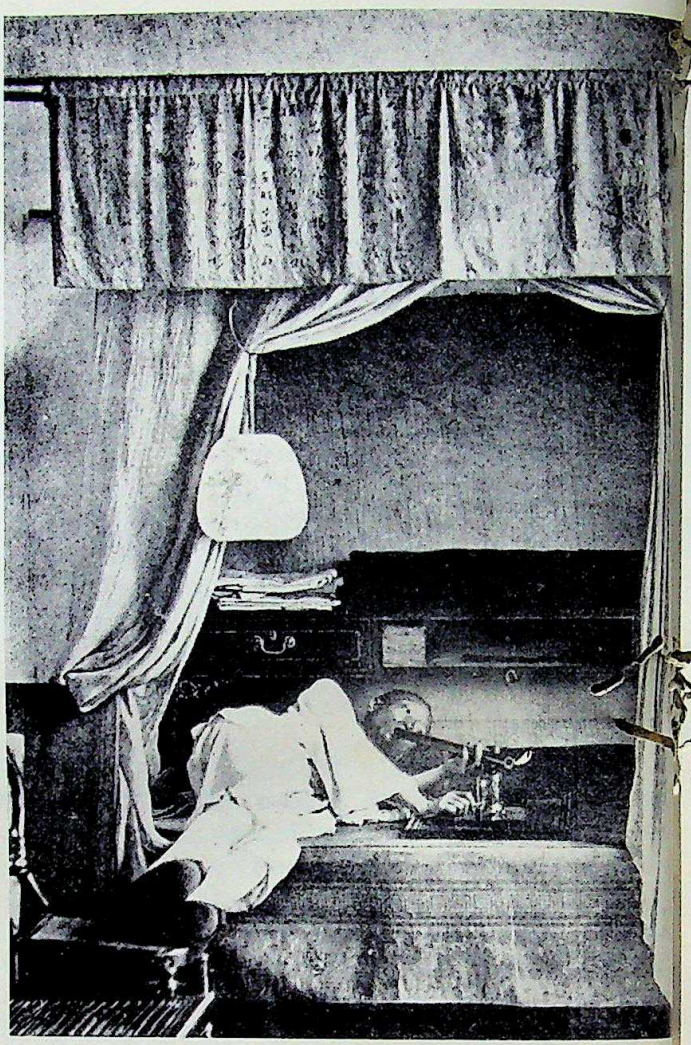
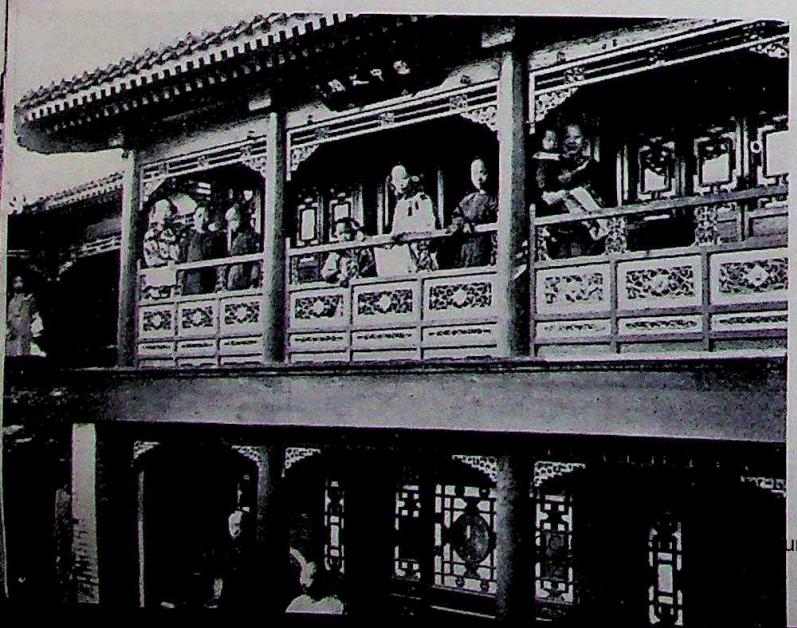
photographic equipment he carried, here is a remarkable achievement in photo-journalism. His photographs of anonymous people in the streets or studio, his record of traders and artisans, are as eloquent and sensitive as his portraits of the rulers. He contrasts the misery of semi-starvation with the smuggness of wealth and power. A traditional China is threatened by foreign intrusion, and deep conservatism by scientific progress. Here is a work of social documentation compiled and produced by a pioneer. It is as valid today, as a history, as it was more than a hundred years ago. We see that China was plagued by a weak and corrupt government and at the mercy of foreign exploitation. We sense the poverty of the land, the backwardness of the farmers, and the decadence of the gentry. China then seemed a fragile nation on the verge of revolution.

John Thomson may have regarded himself more as an explorer and traveller than a pioneer photographer. While he could not fail to realise that his work and technique were original and 'advanced', it was probably not his intention to impart a social message. On the other hand we may read more into his photographs than he intended, although subsequent photographic history now places Thomson in the very forefront of photo-journalists. 'I hope', he said, 'to see the process which I have thus applied adopted by other travellers', and to further this aim he offered his services free to fellow members of the Royal Geographical Society in London, to teach them the rudiments of his art before they set out on their own expeditions.



The Imp

The author, John Warner, was Curator of the Hong Kong Museum of Art from 1962-1976, and the author of Fragrant Harbour, *to be reviewed in* Hemisphere Vol 21, No. 11. *He adds the following information about the subjects of the photographs: The Bronze Temple is 'a very perfect example of Chinese temple architecture'. It is constructed entirely of bronze, except for the marble base. The boat girls are 'trained in the handling of boats from earliest childhood'. The Canton junk is a coastal trader and one of the clipper fleet of Southern China. The photograph of Prince Kung is rare, for he was rarely seen outside the Court precincts. The City Guard was a Tartar bannerman, named Old Wang, wearing a sheepskin coat. On this page are, above, an opium smoker of the wealthier classes; below, the house of a rich Peking government official, and Central St., Peking, taken from the City Wall near the former Central Gate.*



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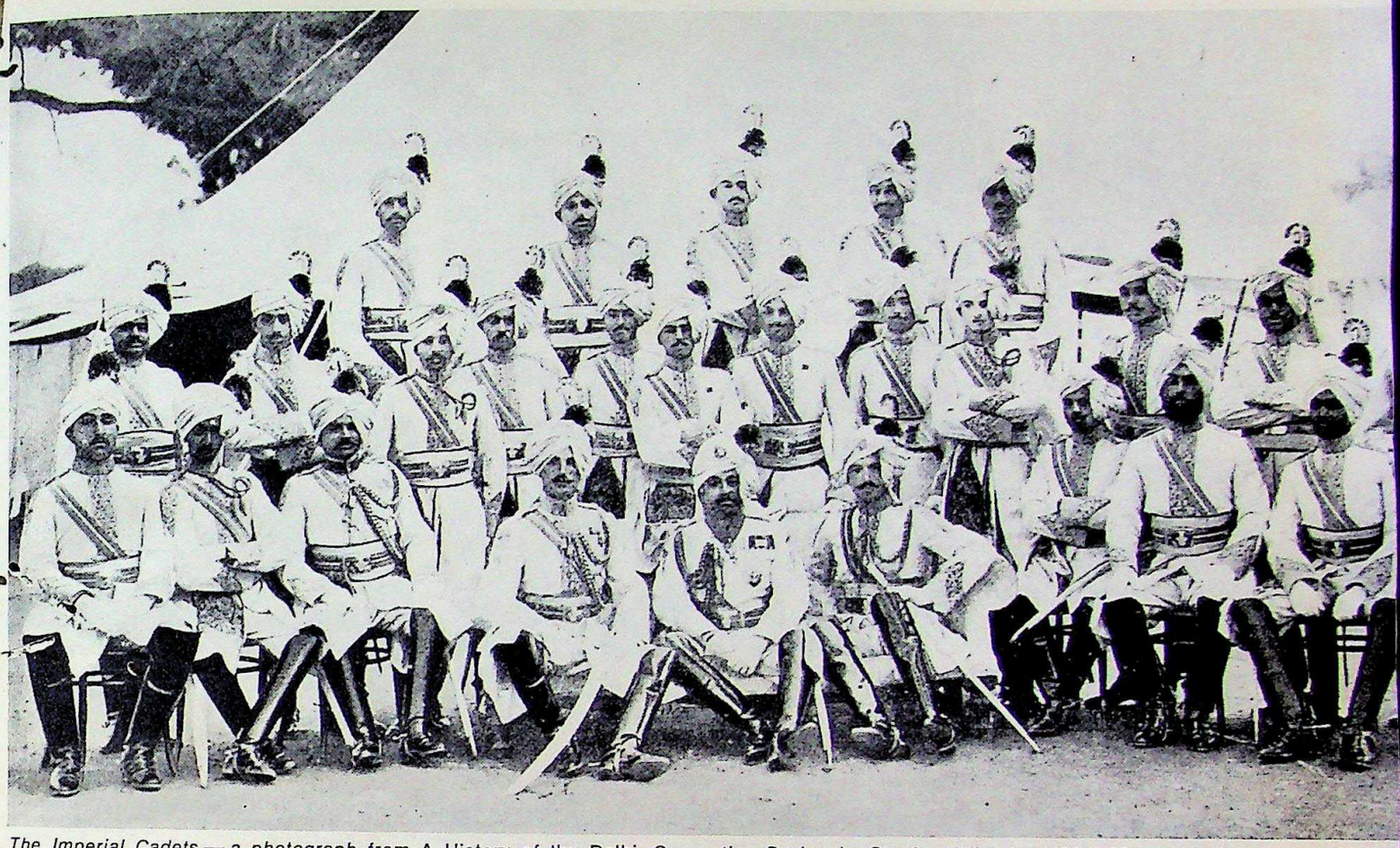

The Imperial Cadets — a photograph from A History of the Delhi *Coronation Durbar by Stephen Wheeler (1904) (Courtesy National Library of Australia).*

THE PEDIGREE OF NATIONS

Shiv Kumar

And who, in time, knows whither we may vent
The treasures of our tongue? To what strange shores
This gain of our best glory shall be sent
T'enrich unknowing nations with our stores?

WHEN Samuel Daniel wrote these lines in *Musophilus* (1599), he could not have anticipated how his prophecy would come true about two and a half centuries later with the formal introduction of the English language in the Indian sub-continent, whose 'strange shores' lay so remote from the nerve-centre of the British Empire. In fact, in the very next year (on 31 December 1600), Queen Elizabeth granted a Charter to a group of British merchants which offered them the monopoly of trade with India. To this fortuitous event may, therefore, be traced the first contact between English and the Indian languages.

More articulate than these traders were the British missionaries who accompanied them to India, charged with the zeal to convert heathens into true believers. 'The true curse of darkness is the introduction of light', these religious pioneers asserted. 'The Hindoos err, because they are ignorant and their errors have never been laid before them. The communication of our light and knowledge to them would prove the best remedy for their disorders.' So, during the first phase, English came to India as the language of 'divine light', as the hand of 'grace', leading the people from ignorance to knowledge and redemption!

It was, however, on 2 February 1835 that Thomas Babington Macaulay, an Englishman in his early thirties who had just arrived to join the Council of Governor-General as Law Member and President of the Board of Education, wrote his famous minute recommending English as the language 'best worth-knowing' and 'most useful to our native subjects'. He enunciated his ultimate goal in unequivocal and pragmatic terms:

We must at present do our best to form a class who may be interpreters between us and the millions

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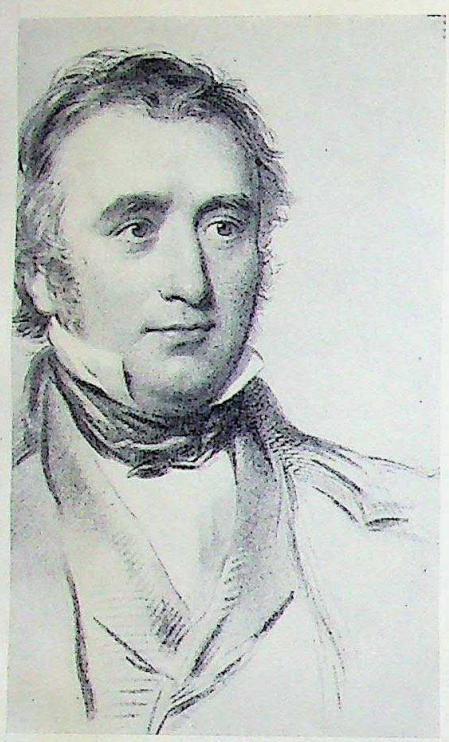
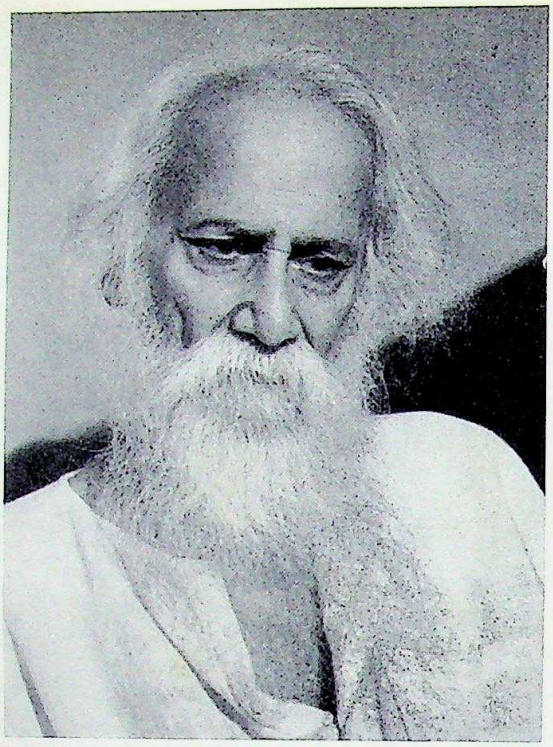
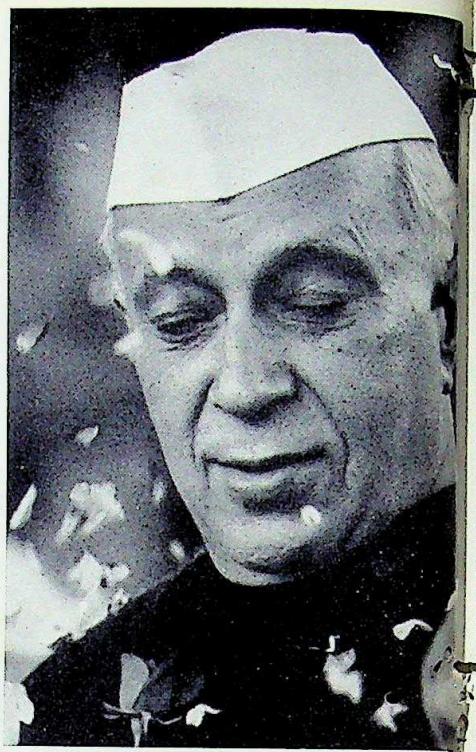

Lord Macaulay, who in 1835, as Law Member of the Council of Governor-General and President of the Board of Education, recommended English as 'the language best worth-knowing'; Rabindranath Tagore; Jawaharlal Nehru, first Prime Minister of independent India. (Photographs; National Library of Australia, The Times of India, T. S. Satyan).

whom we govern; a class of persons Indian in blood and colour, but English in taste, in opinions, in morals and in intellect.

But, impelled by his cultural chauvinism, Macaulay did not stop at this partly laudable objective of creating a bridge between the two cultures. Aggressively, he moved forward to denounce all Indian culture as primitive, stagnant and reactionary. He ridiculed Indian astronomy as something that 'would move laughter in the girls at an English boarding school', Indian history as abounding in kings thirty foot high', and Indian geography as 'made up of seas of butter and seas of treacle'. He rounded off his condemnation of Asian culture with the barb: ' . . . a single shelf of a good European library was worth the whole native literature of India and Arabia.'

Such cynicism inevitably provoked resentment among the Indian classical scholars, and for quite some time the basic linguistic and cultural issues remained in the murky arena of controversy. However, once the heat and din of debate had passed, many sober and enlightened Indians began to discern the tremendous advantages of learning a language that opened a window on the West.

In fact, as early as 1821, fourteen years before the celebrated minute, many progressive Indians had anticipated Macaulay in their enthusiastic canvassing for the introduction of English as a medium for higher learning. They felt the excitement of contact with a culture refreshingly different from theirs, embodied in a language that was supple and responsive to new stimuli. So, when the British wanted to found the Calcutta Sanskrit College, Raja Ram Mohan Roy, a spirited social reformer and an outstanding scholar of Persian, Arabic and Sanskrit, fervently appealed to the Governor-General not to perpetuate the orthodoxies of classical education which loaded 'the minds of youth with ornamental niceties and metaphysical distinctions of little or no practical use to the possessor or to the society'. He added that the 'Sanskrit system of education would be best calculated to keep the country in darkness.'

Ironically, therefore, it was a zealous Indian patriot who came to stress the advantages of English education in phrases almost as astringent as Macaulay's. When the government turned down his petition, he collected, with the help of David Hare, an English watchmaker in Calcutta, sufficient funds to establish the Hindu College, which later developed into the Presidency College. This institution offered for the first time, through the medium of English, courses in 'Tyler's Elements of General History, Russel's Modern Europe, with Milton and Shakespeare.'

However, while young Indian scholars from middle-class families now began to learn English as the key to employment in the government service and also as the language of sophisticated culture, the less privileged had to be content with picking up, mostly on their own, mere rudiments of an 'irregular' alien tongue. This latter variety of English, a hybrid sub-language of a type not

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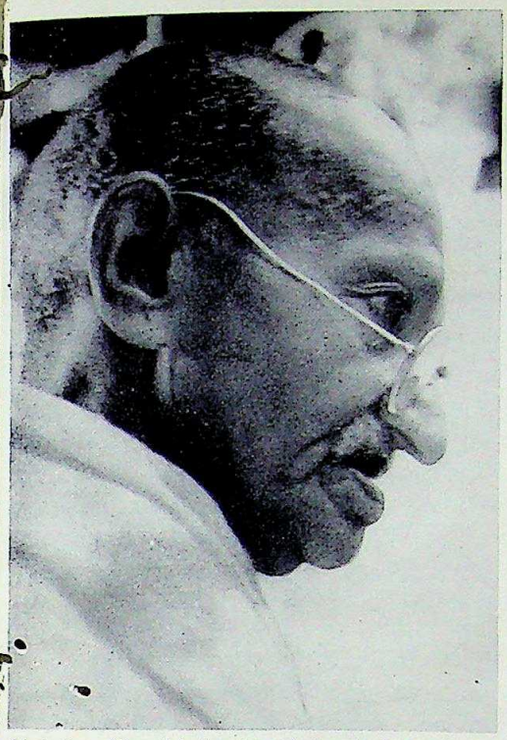

Mahatma Gandhi, leader of the Independence Movement; S. Radhakrishnan, philosopher and President of India, 1962-67; the late Frank Moraes, editor of The Indian Express. *(Photographs, Illustrated Weekly of India, Ram Punjabi, T. S. Nagarajan).*

unrelated to bureaucratic or scientific jargon of today in countries where English is not an acquired but a 'native language'. It was long-winded, ponderous, ungrammatical, though occasionally enlivened with ingenuity in the use of mixed metaphor—came to be known as Baboo English, a source of amusement to the bureaucrats. Take, for instance, this letter written by an Indian to an English officer, thanking him for a promotion in service and inviting him to attend a religious function.

Respectable Sir,

My fingers tremble when I pen my thoughts on paper to put out my gratitude to you for the promotion you have showered on me. I know, Sir, I do not deserve your large-heartedness. And so long as breath stays in my body, and my soul clings to my weak flesh, I shall never forget this act of your godly kindness.

And, now, Sir, may I give myself the privilege, as President of the Town Committee for the celebrations of Shri Krishan Ashtami, and in said capacity to invite you to participate our festivities with your gracious presence? The Central function will commence on 18-56 hours approx — tonight. Music will be given by A, singing party and whole the Hindu publics will attend with the various notables also. The speech of felicitation to the mankind on the birth of the Lord will have the pleasure to be made by my humble self, in English. Kindly do the needful by coming. May the stars always shine on your destiny. Kindly favour with your esteemed reply and oblige.

Your most humble and obedient servant,
Keshav Nath

And here is a specimen of Baboo English as parodied by a twentieth-century Indo-Anglian poet, R. Parthasarathy:

What is you good name please?

I am remembering we use to be neighbours
in Hindu colony ten fifteen years before.
Never mind. What you do now?
You are in service, isn't it?
I am Matric fail. Self-employed.
Only last year I celebrated my marriage.
It was inter-caste. Now I am not able
to make the two ends meet.
Cost of living is going up and up everyday.
Sugar, for example, is costing much.
I am eschewing sugar therefore since last two months.
Also I am diabetes . . .

This sub-language, crudely functional, sycophantic in tone, often bordering on abject servility, remained limited to the lower strata of society. The higher levels of middle-class Indians — lawyers, businessmen, doctors and engineers — acquired competence in the use of the language. Urbane, sophisticated English emerged in the latter half of the nineteenth century as a powerful weapon of revolutionary rhetoric, leading to an upsurge of national consciousness all over the land — a development that Macaulay's empirical mind had not visualised.

Nourished by the dynamic idealism of Burke and Mill, inspired by the glorification of liberty in writings such as Shelley's *Prometheus Unbound*, the Indian mind awoke

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to an irrepressible urge for national independence. The suave eloquence of such political leaders as Tilak, Lajpat Rai, Gandhi, Tagore and Sarojini Naidu, yoking a foreign medium to their new ideals, won for the Indian National Congress the sympathies of many liberal minds in the United States, Ireland, Europe — and even in England.

The long-drawn-out struggle for emancipation achieved its goal on 14 August 1947, when Jawaharlal Nehru proclaimed to the world, in chaste King's English buttressed by Asian imagination and sensibility, the birth of a new nation: 'Long years ago we made a tryst with destiny, and now . . . at the stroke of the midnight hour, when the world sleeps, India will awake to life and freedom.'

About two years later, the same Nehru pleaded before the Constituent Assembly for India's continued membership of the British Commonwealth. 'Here I am the potent example of these contacts, speaking in this Honourable House in the English language. No doubt we are going to change that language for our use, but the fact remains . . . that we are functioning here under certain rules and regulations for which the model has been the British Constitution.'

The wheel had come full circle. Free India had chosen an Englishman, Lord Mountbatten, an uncle of the present Queen, as its first Governor-General, and English had emerged as the only pragmatic link between different parts of the country. However, the advocates of Indian languages labelled all English-*wallahs* anglophiles and, therefore, traitors to the spirit of resurgent India. They reminded their compatriots of what Rabindranath Tagore had said in the days of national struggle; that the place of English in Indian education was like that of a linguistic polythene bag. In language replete with suggestive imagery and profound emotion he had repeatedly asserted that 'the books we read paint no vivid pictures of our homes, extol no ideals of our society . . . nor do we meet there anybody or anything we happily recognise as our friends or relatives, our sky and earth, our mornings and evenings, or our cornfields and rivers.'

Similar sentiments were reiterated by Abul Kalam Azad, India's first Education Minister. Gradually, Nehru allowed himself to be led to recognise not only Hindi as the national language of India but all the regional languages as the proper media of instruction at least up to the school stage. Each regional language now had claims to supremacy in its own State. The situation that followed this linguistic free-for-all is admirably summed up by Harrison in his book *The Most Dangerous Decade* (1960):

> Independence was an invitation to each language territory to come into its own, invoking the memory of what each can summon forth from the millennia of Indian history. Each caste group, too, saw in a free India, dedicated to equality, a chance in Orwell's sense to be more equal than the rest.

With each language asserting its own distinct identity in terms of its unique literary heritage, India appeared on the verge of cultural disintegration. The North insisted on Hindi as the only national language, and manoeuvred to impose it on an unwilling South; divisions yawned into unbridgeable gulfs.

In the midst of this chaos, English re-emerged, quietly and almost invisibly, as the only link between all different regions of the sub-continent. Still derided as an evil remnant of colonial rule, it nevertheless kept forging ahead with dogged steadiness and self-assurance. Osmania, the only University that had used Urdu as its medium of instruction until 1947, now switched over to English. And political leaders who continued to indulge in tirades against the English language on public platforms preferred as private citizens to send their children to English-medium schools, lest they should lag behind in the race for social, cultural and intellectual advancement.

About this time, Mulk Raj Anand, a noted Indo-anglian novelist and short-story writer, made a fervent plea, in an open letter to the Education Minister, for an honest and dispassionate appraisal of the place of English in India. English, he observed, had rooted itself in the Indian soil in spite of all the dubious motivation attributed to its supporters. 'If one can imagine the kind of dynamic agro-industrial civilisation that we need to achieve, it will become imperative to teach many more millions of our people the basic English language in order to transmute technology and to create a pool of translators who may render world knowledge to the various states.'

The *rôle* that Macaulay had envisaged for English to act as the medium of interpretation between rulers and subjects had now been reinforced by an Indian writer and philosopher. But Anand pressed forward to plead for the christening of English as an Indian language. Why not embrace it as yet another member of the Indian family, to be recognised and respected in the country of other Englishes, such as British English, American English, Singapore English, Sri Lankan English or Australian English?

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Shiv Kumar, who has visited Australia, is Professor and Chairman of the Department of English at the University of Hyderabad. He has been a member of the National Advisory Committee (English). The second part of this article will appear next month.

Articles previously published in this occasional series on usages of English in various countries are: *Singapore English* Vol. 19 No. 4; *Filipino English,* Vol. 20, No. 2, and *Australian English* Vol. 20 No. 10.

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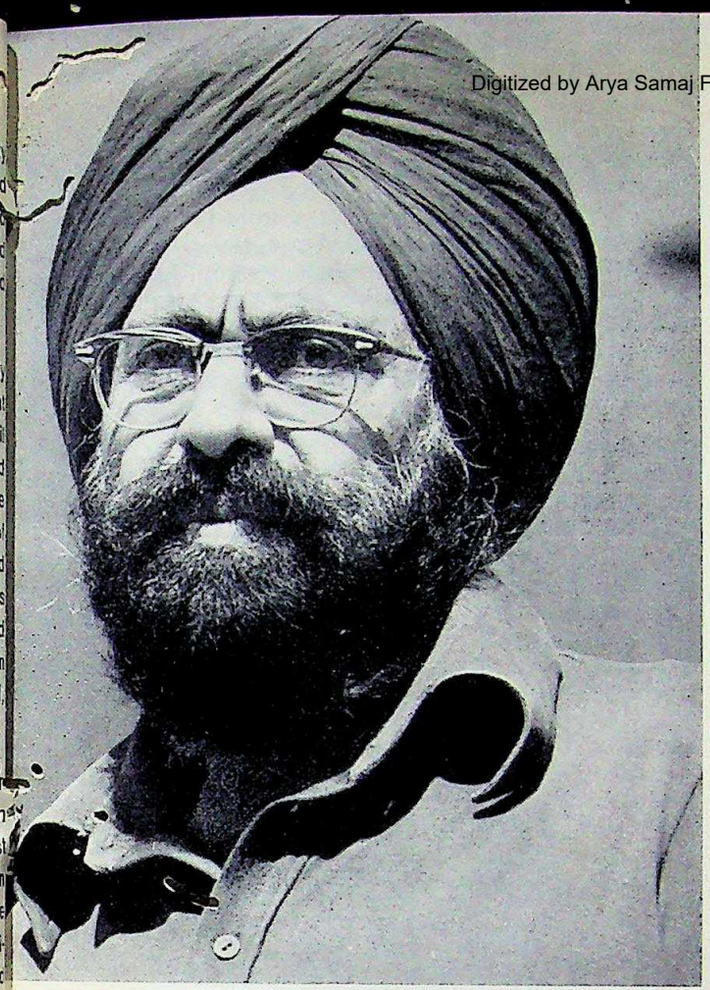
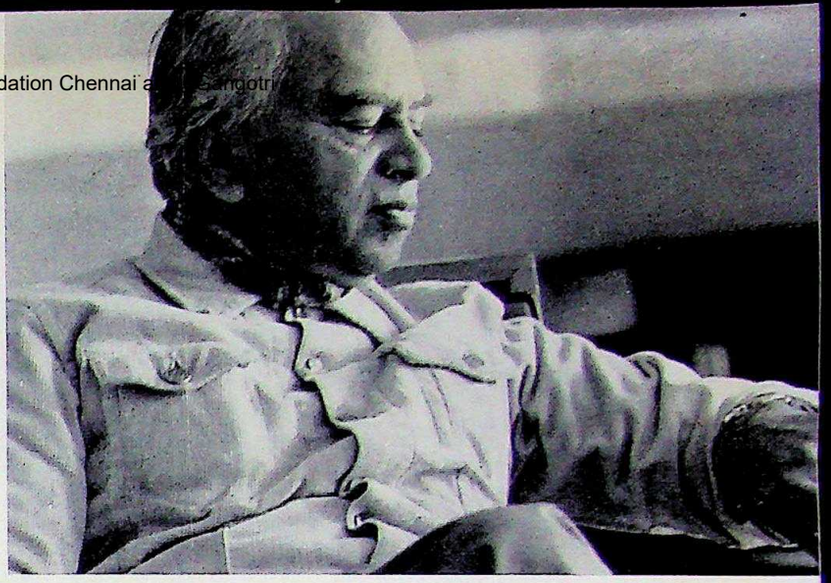
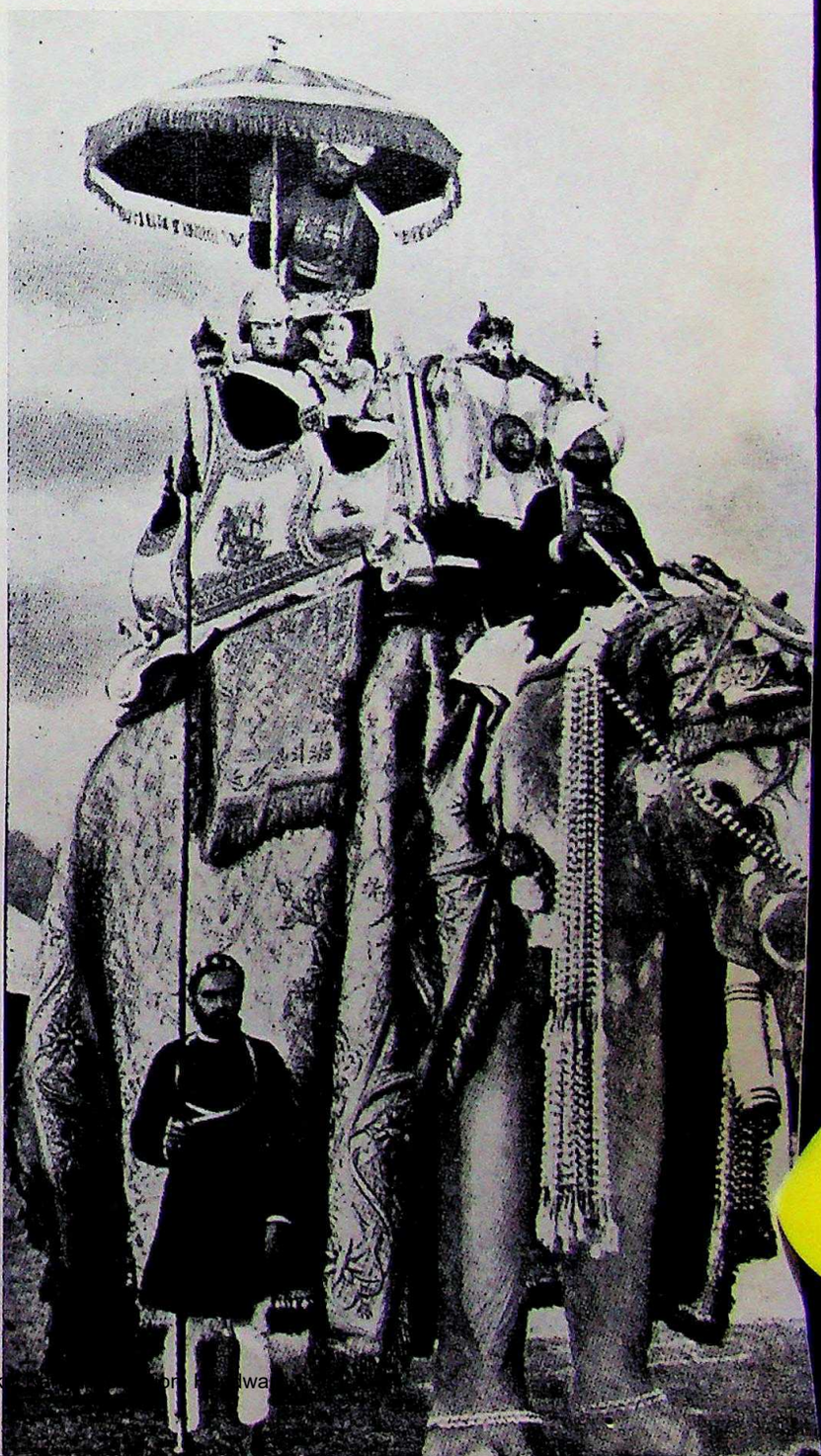




THE TITLE: 'I am always sorry when any language is lost, because languages are the pedigree of nations.'
Dr Johnson, in Boswell's *Tour to the Hebrides.*

Above: Khushwant Singh, editor of the famous Illustrated Weekly of India; *below: E. M. Forster, the British writer believed by some to have interpreted India to the outside world, with his friend, Sir Syed Ross Masood, who figures as Aziz in* A Passage to India; *Top right: Mulk Raj Anand, a leading writer in English for forty years; Right, the Viceroy, Lord Curzon, and Lady Curzon at the Coronation Durbar at the turn of the century. (Photographs, John Fairfax & Sons Ltd., British Council, and the National Library of Australia).*



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MICRO ART

Netsuke, a comprehensive study based on the M. T. Hindson collection with a preface by W. W. Winkworth; by Neil K. Davey. Faber/Sotheby. ISBN 0 571 09979.

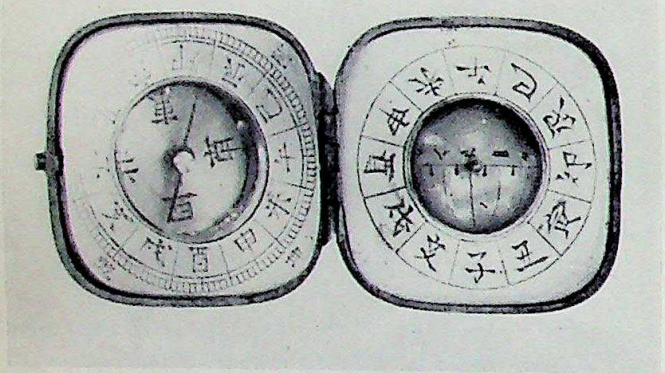
Photos: Sotheby Parke-Burnet Publications Ltd., London.

A UNIQUELY Japanese art form, *Netsuke* had a very mundane origin but, like most things in Japan, soon acquired a beauty and a perfection of craftsmanship that in its minuscule way rivalled other Japanese art forms. This in spite of the fact that many people regard them as the product of a craft and not, therefore, great art.

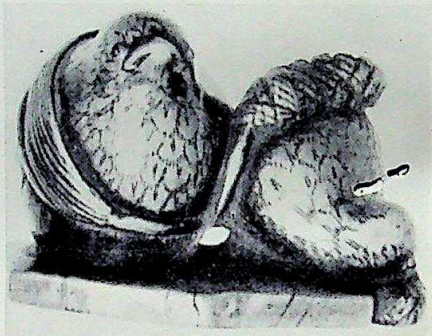
Netsuke are simply toggles, used in Japanese formal dress, to secure the cord of the small bag in which belongings are carried, suspended from the *obi*, or sash. The choice of subject is infinite: a formalised chrysanthemum, figures of human beings — early Dutch traders, ghosts, fishermen, mermaids, demons —, mushrooms, foxes, lions, tigers. The rarest material used was ivory, an import, but ebony was in frequent use, as well as the locally produced, rich-grained woods such as cherry, pine and sandalwood.

The art-form flourished for three centuries, from the sixteenth to the nineteenth, reaching its peak in the eighteenth century, but these tiny, delicate art objects were produced until well into the second half of last century.

Now, they are collectors' and museum pieces.



A tiny compass and sundial, described by the author as 'one of the finest netsuke *yet recorded'. He quotes his mentor, Meinertzhagen, as dating it about 1800.*



An early nineteenth-century netsuke *of two quail, one perched erect, the other bending down to peck. It is in light wood, with the eyes of inlaid horn. The humour of this work lies in the fact that the birds are not frightened of the bird-scare on which they are perched.*

'A PROPER ORNAMENT'

AUSTRALIANS, like so many other islanders in this world, are inclined to think that they are the only ones to have made certain brilliant discoveries. One such, according to the advertisements for houses for sale in the inner suburbs of the cities, is that we are the only people with 'iron lace' — the decorative cast iron that you find on balconies and fences. So great is the longing to have 'lace' that chairs are now being moulded out of aluminium for those who have gone past the stage of the garden decorations of gnomes and frogs and cranes made of concrete. If you really want to look classical, you can buy Greek columns moulded in aluminium, by the yard.

A refreshing reminder to us that we are not alone is a book called *Cast Iron Decoration* (ISBN 0 500 23254 7) by E. Graeme Robertson and his daughter, Joan, who, after the sad death of her father before the book was ended, completed the work. This book, of convenient though large format, is another in the series of excellent publications by Thames and Hudson.

It is good to leaf through the book slowly, and see the Kremlin photographed from the Bolshoi Kamenny Bridge, its balustrade, in close up, heavy with cast iron designs celebrating industry and agriculture; houses in New Orleans combining the Grecian grace of white columns (not of aluminium) with the delicacy of cast iron; balconies in Bombay, fine scrolls and filigree in Cheltenham, a city in the English countryside, the pseudo oriental arcades of the Royal Pavilion at Brighton with, inside this magnificent folly, the unforgivable monstrosity of a stair balustrade modelled in iron in the form of bamboo and even painted to look like it.

Wrought iron is always associated with Spain, of course, at least as far as Europe is concerned, and delicate *miradors,* tiny glassed-in balconies outside windows to

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trap the sun and keep out the cold winds of continental winter in inland Toledo, but cast iron has its place there, too.

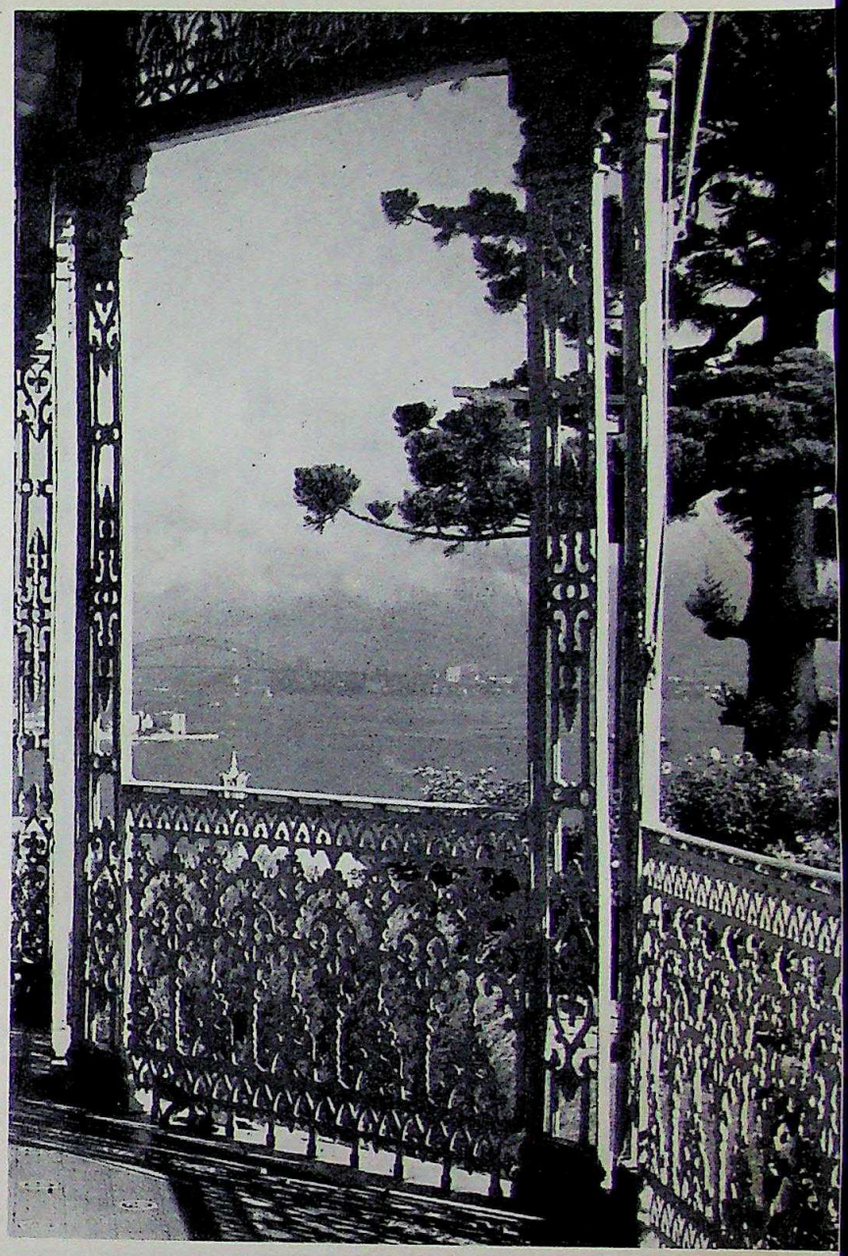
This utilitarian decoration is in marked contrast with the British delight in discovering what you could do with iron in building, decorating the basic form with cast iron — a heavy-footed striving after light and airiness towards a domed, glass roof. This is the old Coal Exchange in London—perhaps a suitable centre for other produce of the furnaces to be exhibited—tragically pulled down in 1962. Actually, the first use of cast iron architecture was in Britain: a railing made in 1714.

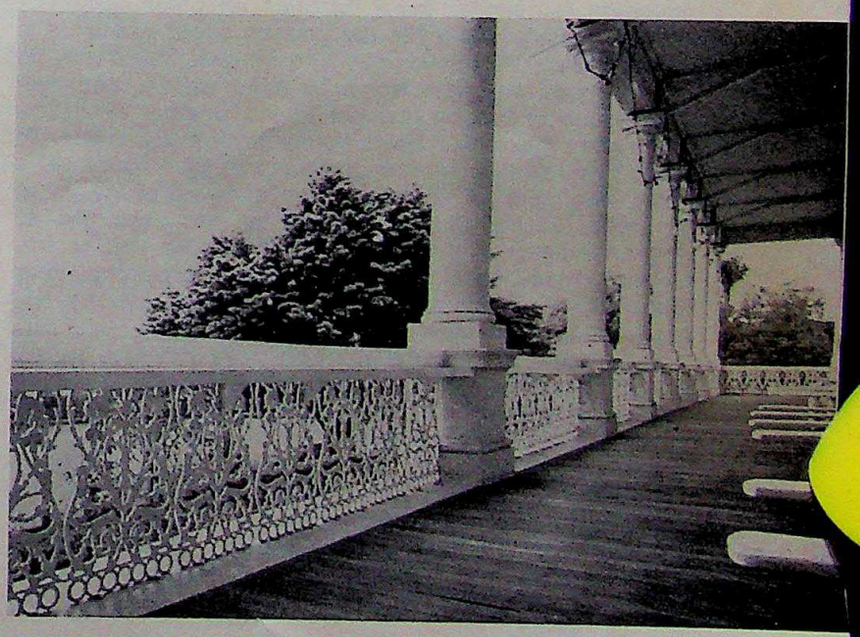
In Australia, high prices are paid for old houses with the iron lace decorations, and sold after repair for even higher prices, because people are slowly learning the value of their own history, and the beauty that comes with time, as against the smartness and snappiness of so much city architecture, imitations of what has long ago happened abroad, and domestic architecture which had formerly been a copy of what happened elsewhere. At present too much building seems to be a quietly wild search for the gimmick, such as the beams extended from the sloping roofs of houses right to the ground — perfect traps for the heads of the unfortunates who happen to walk into them, or else great expanses of expensive and heat-inducing glass made into walls expressly to wake people before dawn, to require enormous expenditure on curtains, and, in the hotter parts of the country, to trap as much sun as possible, while providing a view on to the neighbour's high wooden fence a few metres away.

Lace, even in cast iron, lends a touch of fancy to a house or a public building, and its swift spread is shown by the explanation given by the publisher about some of the work the two authors went to in its making: 'By research in pattern books and manufacturers' catalogues, they are able to document a great many of their examples: a balcony in Philadelphia is shown to come from an English pattern book of 1824, ironwork in Utrecht appears in a Parisian catalogue, designs advertised in Glasgow are found copied in Adelaide.'

It would seem that this new Iron Age, the epoch during which man progressed from making cooking pots and weapons from iron to making bridges (the first, in Britain, 1779), has lasted for about three hundred years. It is good to have such a valuable guide to it written with the affection and care that E. Graeme Robertson and his daughter Jean have given.

—PETER MARSHALL





Two examples of cast iron in Australia: Sydney Harbour framed by the cast iron on the verandah of a mansion at Rose Bay, and the pillared verandah of the Queensland Club in Brisbane; on the right, chairs with arms extended to rest the legs of members.

(The title is from a catalogue published in France: *A Treatise of Architecture*).

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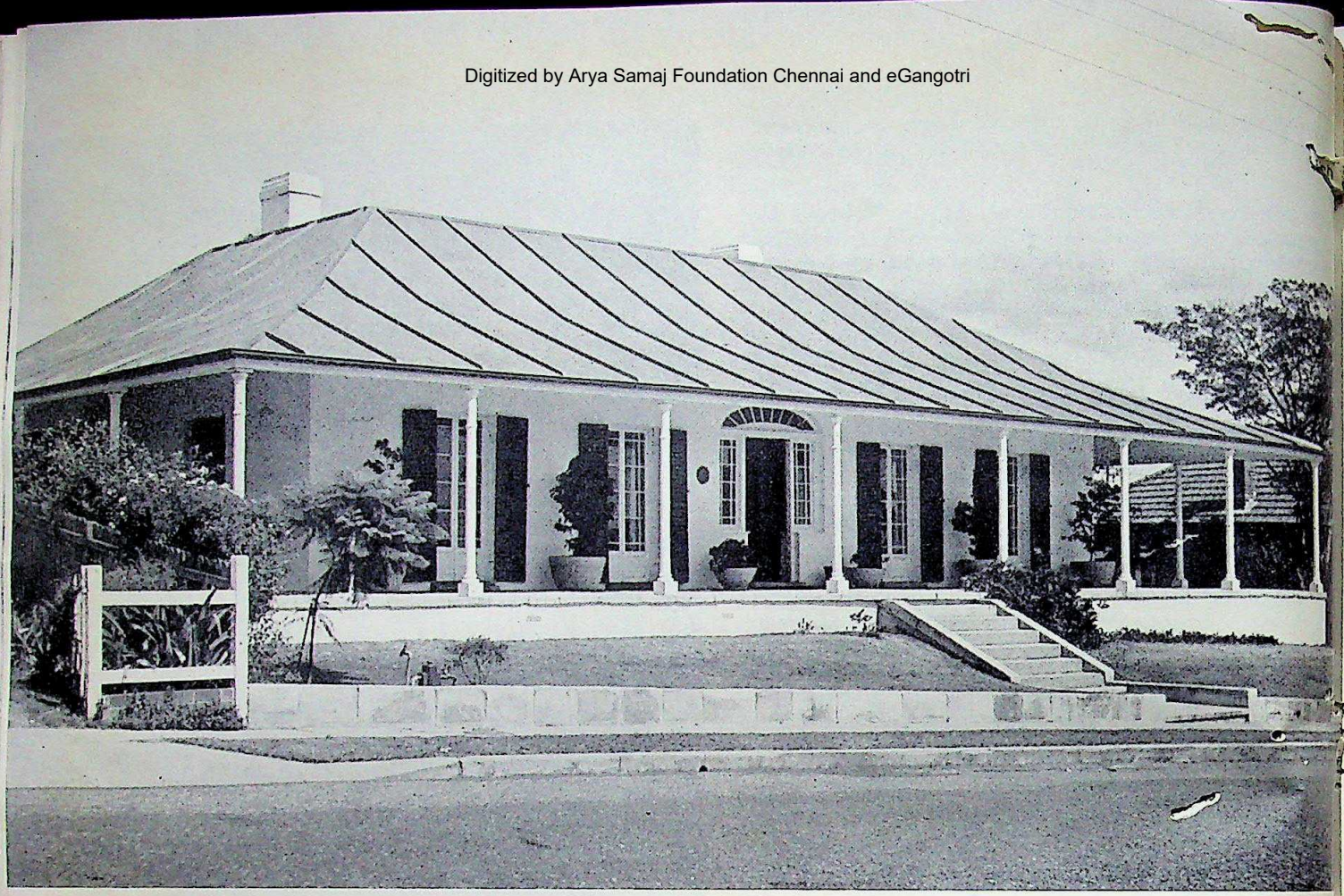

(J. Whiteloc

Experiment Farm Cottage, Parramatta, N.S.W., built about 179

A FUTURE, MAYBE?

A Concise History of Australia, by Robert Lacour-Gayet; Penguin Books, 1976; XII + 484 pages. ISBN 0 14021995.

THIS is an admirable short history of Australia. Written by a French historian with all the clarity for which French writers are justly esteemed in the world of letters, and translated with both accuracy and art into English by James Grieve, this book deserves a wide reading public.

The author, Robert Lacour-Gayet, has already made a reputation for similar short histories on other countries, such as Canada. He visits the country about which he is writing, meets its public men and women, talks with its writers, reads the main works by other writers, and then digs around in French material to see whether his fellow countrymen have had anything to say on the matter in hand. The result is often quite illuminating.

His treatment of the character and achievements of Sir Henry Parkes (1815-96) illustrates the point. Parkes was an enigma both to his contemporaries and to historians. Alfred Deakin (1856-1919, Australia's second Prime Minister), who beneath a so-called civilised exterior had much of the cattiness and nastiness of the public man who spends his leisure drinking tea with the ladies, said Parkes always had in his mind's eye his own portrait as that of a great man, and constantly adjusted himself to it. But, as Lacour-Gayet wisely points out, the man seems to have been extremely complex, and it would be superficial to reduce him to mere pride. He was, for example, incompetent at managing his own private affairs, but very competent at arranging public affairs, Lacour-Gayet received his first hint of the greatness in Parkes not from the Australian sources but from a remark in the *Revue Des Deux Mondes*, which described him as 'one the outstanding figures in the whole British Empire.'

On all the principal figures in Australian history include from the founder of the colony of New South Wales, Arth. Phillip, to Gough Whitlam, Labor Prime Minister in th 1970s, Lacour-Gayet is judicious, witty, well-informed ar often illuminating. He has, for example, the detachme to detect both the bully and the romantic in the bus ranger Ned Kelly, to see clearly why a man who co bined in his person the vicious qualities in the ug Australian as well as high-mindedness should ha become a national hero.

He is excellent on the achievements of the Whitl Government. He is both informative and wise o metals boom in Australia, and the part played in all t sound and fury by men such as the Western Australia Lang Hancock.

If there is one thing lacking it is, perhaps, a sense the deep crisis in which Australia now finds itse Lacour-Gayet sees clearly that this ancient, uncou continent belonged first to the Aborigines, came unc the influence of the British and was saved by t Americans during the second world war, and that n those who live in it are uncertain of the future. Lacou Gayet seems to believe it has a future as a site for Eur pean enterprise. Indeed he seems to believe Austral thanks to its minerals, might even become great. seems to have no doubt about the future of free enti prise, nor to fear the coming of an age of barbaris He is not a man for the 'lower depths'.

MANNING CLA

Manning Clark, former Professor of Australian History the Australian National University, is now a Library Fel there.

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REQUIESCAT

No roll of drums. No twenty gun salute.
No black cortege. No flag-draped catafalque.
The cries of anguish of the world are mute.
No armies march. No grief-torn mourners walk.
Two children turning cartwheels as they pass,
The click of willow on the flannelled green,
The dappled shadows racing through the grass,
Are epitaph enough; and in between
The ache of loss and the loss of aching,
Across the wattled boundaries of sound
Will come snatch of song and joy of mourning,
A memory buried and a stillness found.
Primal plasma gushes through the ether.
Death is not a full stop but a comma.

—ANTHONY TURNER

TO KILL AN OLIVE

Nobody knows how long it takes to kill an olive.
Drought, poverty, fire are in vain. A great frost can leave
the trees leafless for years. They revive. Investing armies
will fell them. Ten or fifty years on, they return
through the burnt-out ribs of siege-machines. Tear one out,
grub up a ton of main-root for firewood, and next Spring
every side-root sends up shoots.

Only the patient goat, cropping his way down the centuries,
has malice to master the olive. Let the sprout
a cut tree sends up be eaten: the root goes to sleep
eleven months till another Spring.

Sometimes, they say,
a man finds a dead orchard, fired and goat-cropped centuries back.
He settles and fences. The trees revive. His grandchildren's family
thrive by the oil-pressing trade. Then wars & disease wash over.
Goats return. The olives go under; waiting another age.
Their shade still lies where Socrates disputed.
Gethsemane's withered groves are bearing yet.

—MARK O'CONNOR

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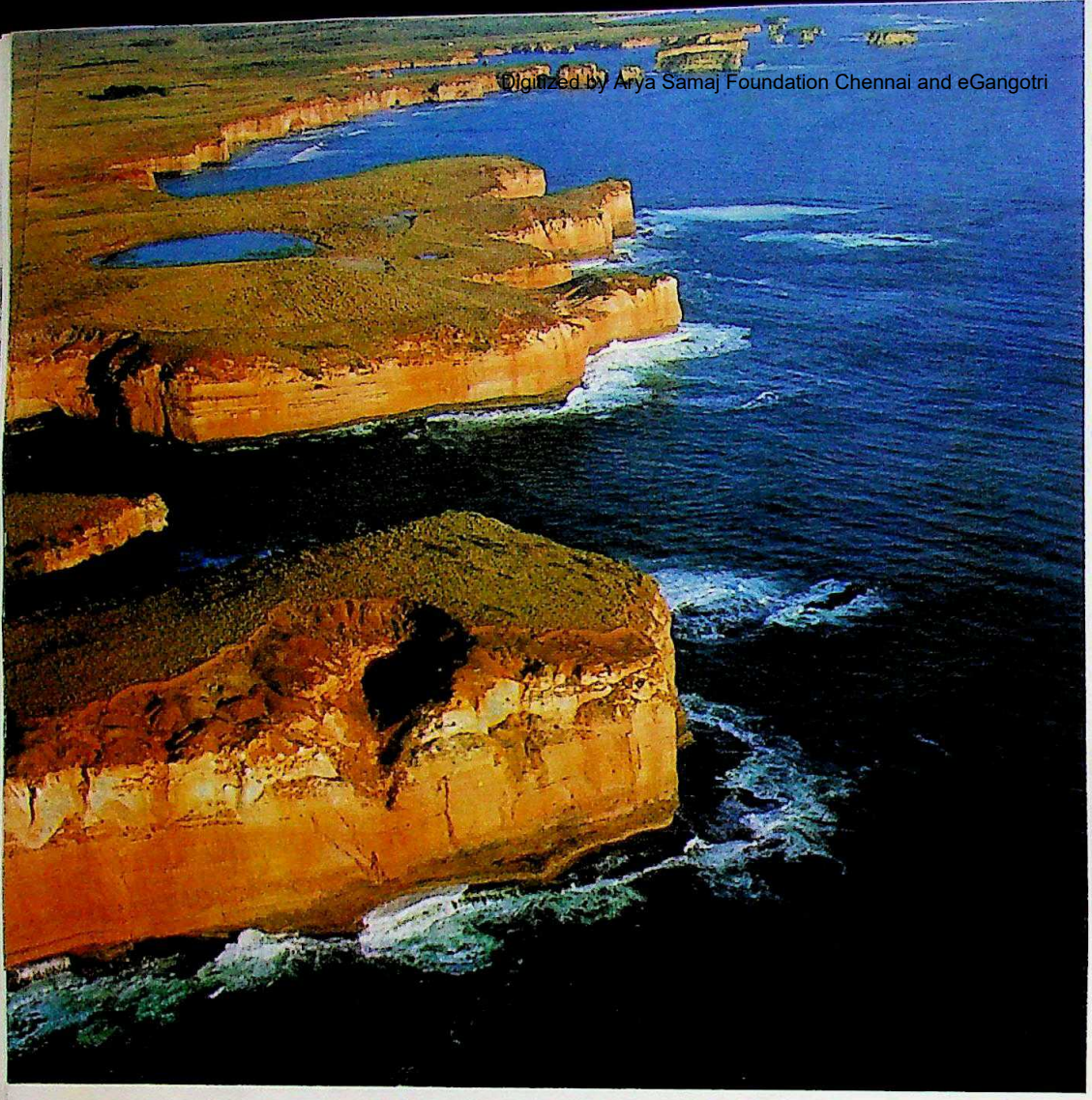

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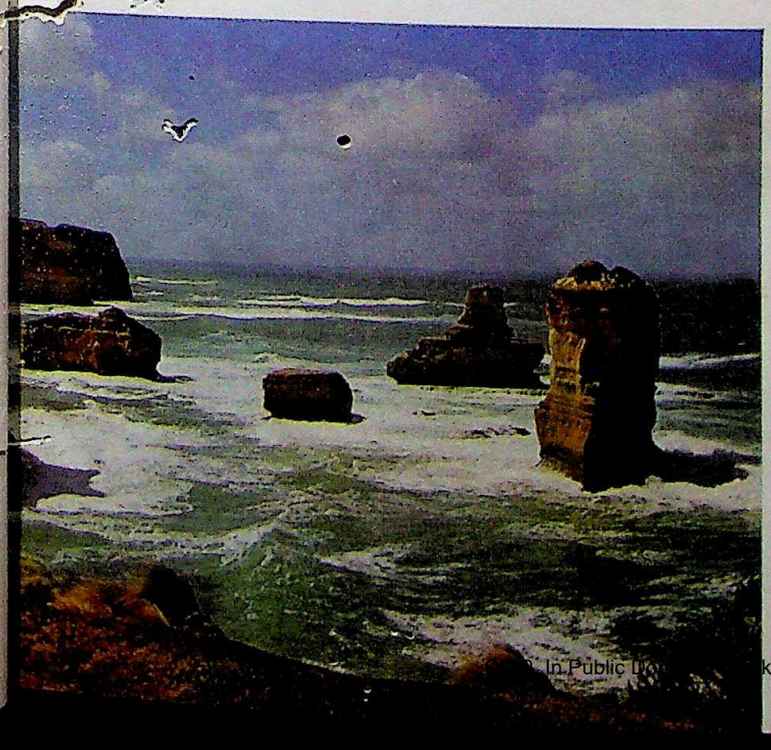
'A STERN AND ROCK-BOUND COAST'

(HEMANS)

Photographs: KEN STEPNELL

VICTORIA'S SOUTHERN COASTLINE AND BASS STRAIT



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REEF FISHES

A Field Guide to the Reef Fishes of Tropical Australia and the Indo-Pacific Region, by R. H. Carcasson; Collins, London and Sydney, 1977. ISBN 0 00 219665 4.

THIS book is strictly a field guide enabling quick identification of approximately eighteen hundred species of reef fishes throughout the region. Seven hundred and thirty-seven of these are illustrated, four hundred in colour (forty-eight plates). The work is bound in a plasticised hard cover, a practical feature which should help it withstand the rough usage and damp field conditions it may meet.

Apart from the many species described, the outstanding feature is the unique and easily-used key to the major groupings of fish. With a little careful observation (and perhaps a little trial and error), an unknown specimen is matched to one of a series of clear line drawings with brief descriptions of the various orders, sub-orders and major Percoid families. Turning to the relevant page reveals a more detailed description of the group. From then it is a matter or reading the specific descriptions and checking the illustrations. This method of tracing an unknown is a simple version of the complex keys found in strictly scientific works which require considerable technical knowledge and much practice to use reliably.

A list of references is provided — unfortunately, too brief. Notable omissions from the list are useful Australian works by Grant, Roughley, Whitley and McCulloch, as well as journals dealing regularly with the description and taxonomy of fishes. Similarly, specific references on sharks and rays are absent. This is particularly unfortunate, for the author deals with them at insufficient length. For example, though several species of whalers (from the genera *Eulamia* and *Carcharhinus)* are common in the region, they do not rate a line drawing, colour plate or any other means of separation. In fact, there are no colour plates of any sharks or rays, and few drawings. Some reference should have been made to outsi sources of information, for these fishes often com interest out of all proportion to the number of spec or individuals involved.

To make up for this, especially for the aquarist a skin-diver, is the large number (by comparison with oth popular works) of smaller reef fishes described, especia the *Pomacentridae* (damselfishes), *Scaridae* (parrotfishe and *Chaetodontidae* (butterfly and angel fishes).

The book is meant for the amateur naturalist, skindiv aquarist or fisherman, but it will certainly be of conside able use to those with a professional interest in mari science; it is easier to use than the various treatises ava able, yet much more comprehensive than the curre popular works. The latter may sometimes provide clear illustrations and more information, especially on ec logical matters, outside the scope of this book which concerned principally with field identification. Thus, th will still be read along with Carcasson's more comp hensive work.

If the quality of this book is maintained, one is w advised to watch for the publication of the author's co panion volume on the rest of Australia's sea fishes, n in preparation.

ANDREW GREEN

The reviewer, a science graduate of the James Cook U versity of Townsville, has a special interest in marine life.

More Than Memorable

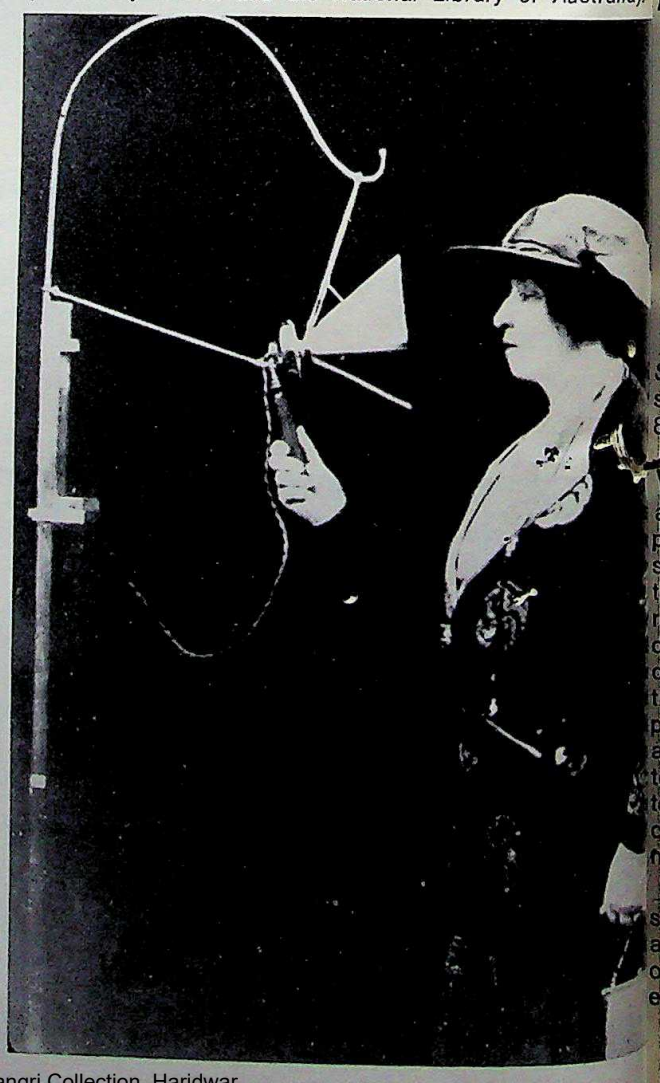
Melba Re-visited, by Maie Casey. ISBN 09597486 IX.

THIS little memorial, published in honour of the subject's grand-daughter, is about one of Australia's best-known citizens, the singer whose superb voice, recorded as it was on primitive instruments of the day, still has the purity and control that must have made a live performance by Melba more than memorable. The essay is informed, affectionate and humorous.

Lady Casey, widow of another distinguished Australian, a former diplomat, politician and Governor-General, writes of her first impression of two, not one, of the greatest singers of the past one hundred years:

'Bohême, sung by Melba and Caruso, was the first Opera I ever saw. I can see it now as I saw it then and fifty times over the years. . . . These two bulky world-famous artists, who could hardly kiss standing up to their sudden love in the first act's attic (more easily of course when Mimi lay dying in the attic bed) took me by storm. Her notes were agile, sustained and perfectly pure (Caruso's were passionately earth-bound and as vigorous as Youth itself in Excelsis.)'

Dame Nellie Melba, recording in Britain in 1920. (Photogra by courtesy A.W.A. and the National Library of Australia).



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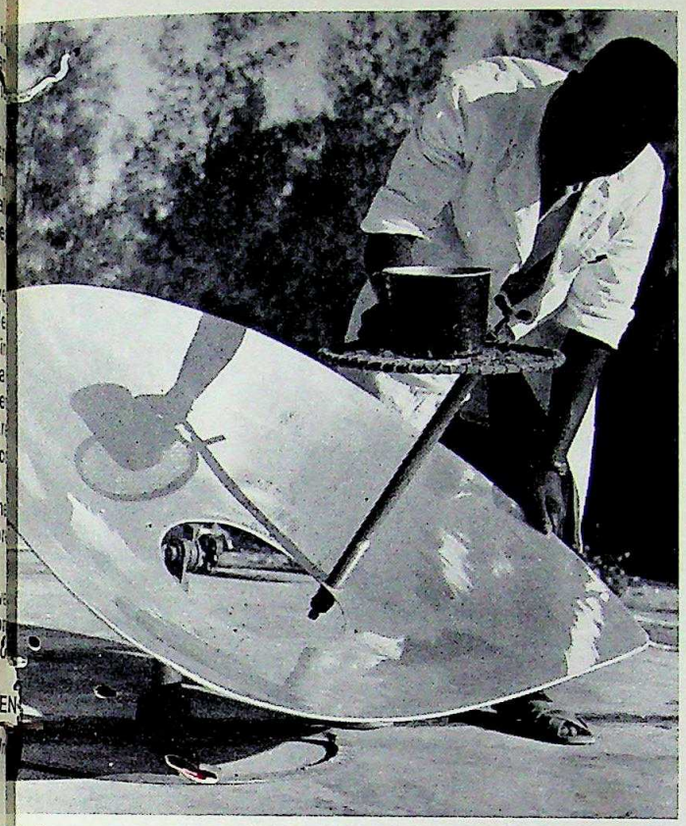
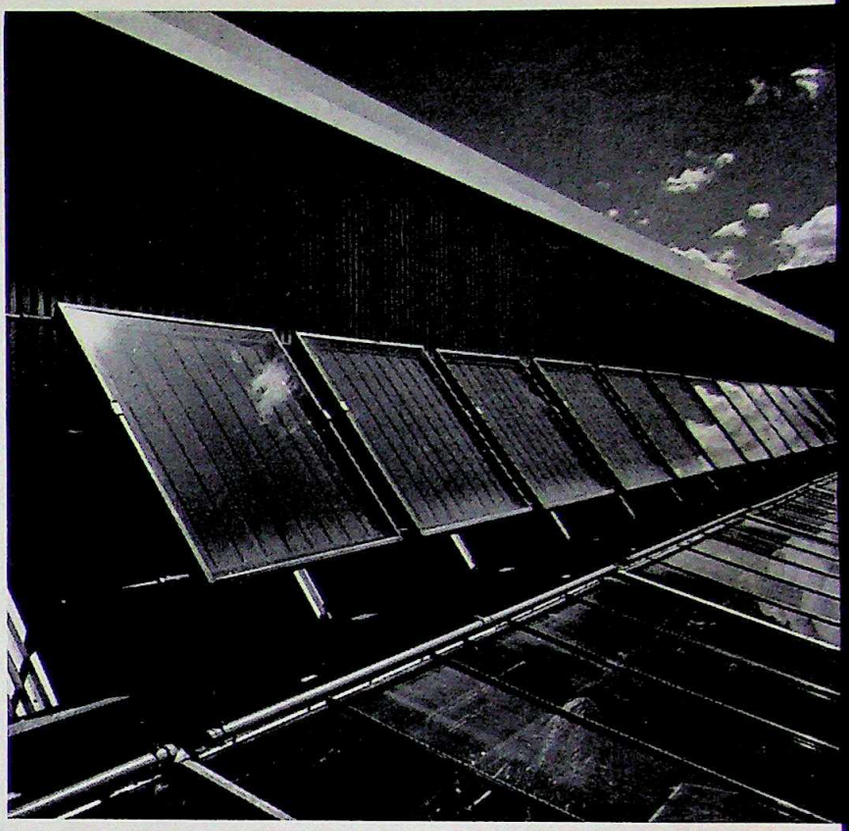


Solar energy on a modest scale: a solar oven for households, similar to those in use in India. This one is at the Solar Energy Laboratory at the Dakar University in Senegal. (Photograph courtesy Unesco).



Solar energy in use at the phytotron in the Plant Industry Division of the Commonwealth Scientific and Research Organisation, in Canberra, to control plant temperature and heat water for general use in the building. (Photo: Colin Totterdell and C.S.I.R.O.).

MORE ON THE SUN

Solar Energy and Building, by S. V. Szokolay; our copy supplied by the A.N.Z. Book Co. Pty. Ltd. ISBN 0 470 84304 5.

WITH the increased interest in and emphasis on all aspects of the use of solar energy, one of the basic problems facing anyone intending to implement any solar technology is the scarcity of useful design information in a compact and condensed form. In general, the required data from research and development is widely distributed through the literature and is inevitably difficult to track down. The author of this book has realised the problem and defined one of the aims as the compilation of such information, and he has succeeded admirably. There is sufficient data in the book to allow technological laymen to enter the field of this new technology. Adequate reference material is given, on a chapter by chapter basis, to allow extended reading in more depth when required.

This text should prove a useful addition to the sparse solar literature. It may help to bridge the gap between architects schooled primarily in aesthetic appreciation of form rather than in technological appraisal and engineers who often opt for a hard technological solution with little appreciation of the aesthetic and social factors involved in the end result. Limited mathematical and technical knowledge is required to appreciate the examples quoted throughout the book, and a realistic attitude is maintained to the practical implementation of solar energy devices.

For laymen and even for practising architects, possibly the most interesting material is contained in Chapter 5, which surveys a reasonable sample of solar dwellings on a world-wide basis. In this section a valuable collection of reliable performance data is presented along with a discussion of both passive and active solar heating and cooling systems.

If the book were to provide no more than an introduction to the methodology of visualising problems in the energy field, it would still provide a worthwhile addition to the energy texts available. However, I believe that it will provide for many a convenient starting point in the preliminary design procedure of future solar energy installations in building structures.

W. W. S. CHARTERS

W. W. S. Charters is Chairman of the Department of Mechanical Engineering at the University of Melbourne.

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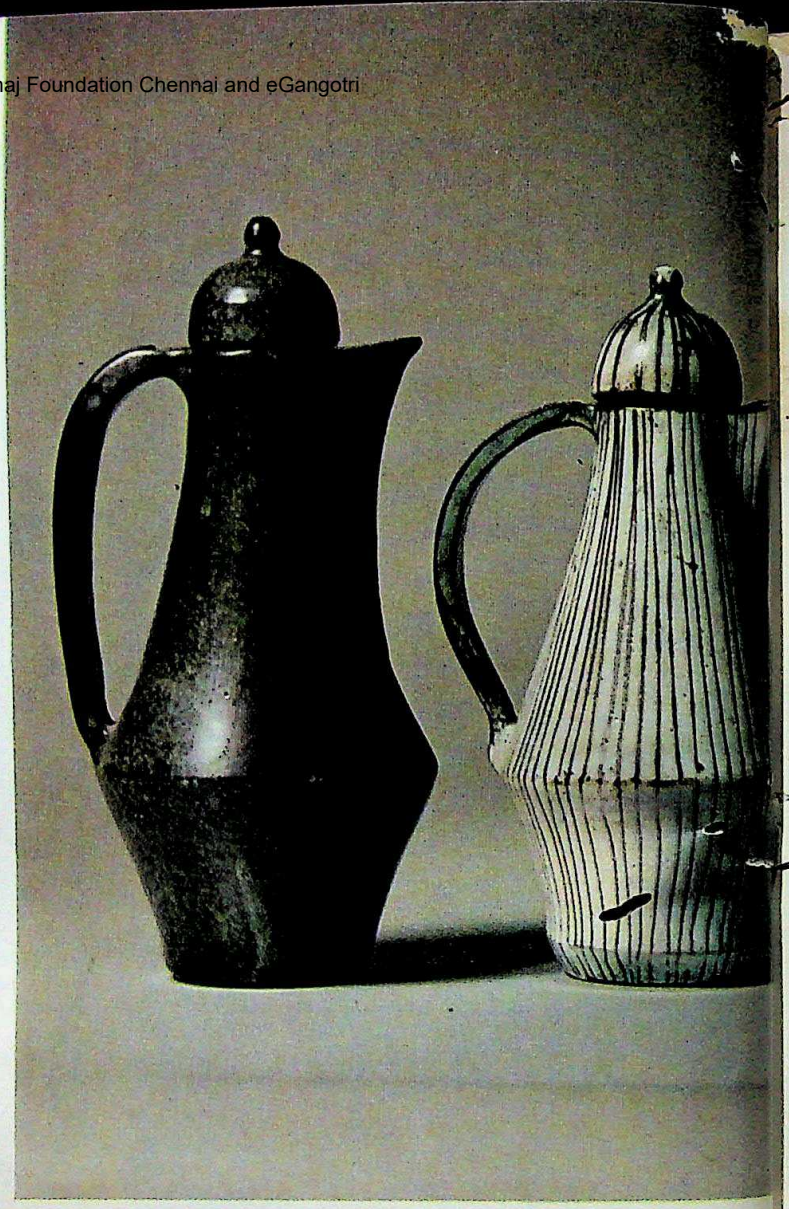
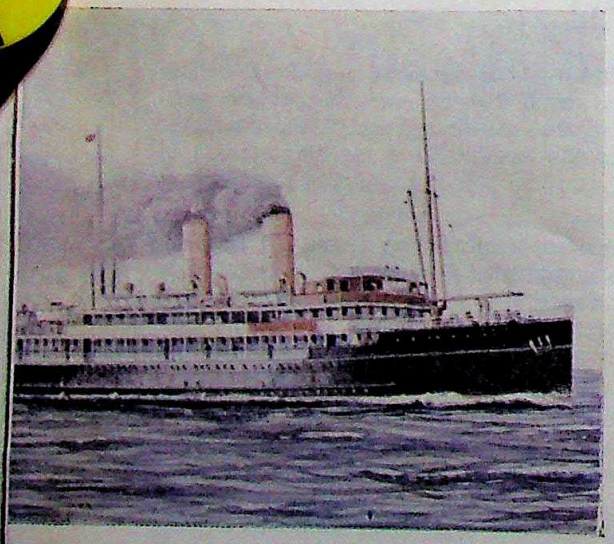
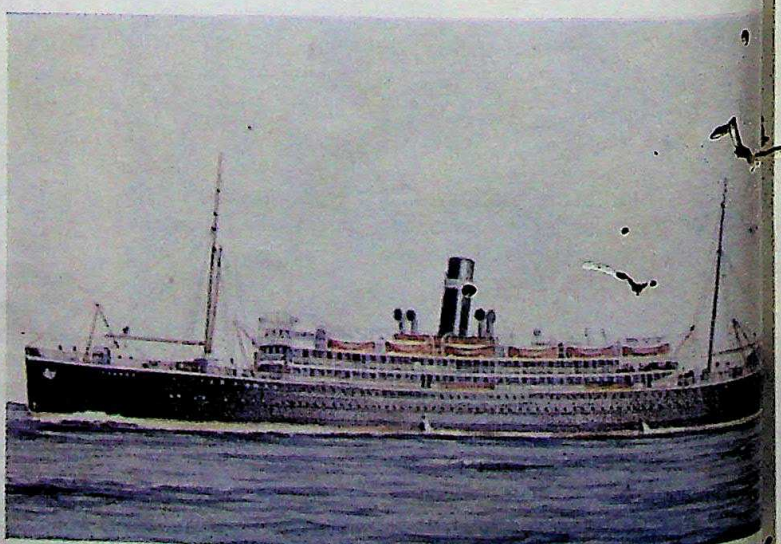
POTS FOR PEOPLE



The coffee-pots at right make up one of the many rich illustrations in The Pottery and Ceramics of David and Hermia Boyd, *by John Vader (Mathews/ Hutchinson, ISBN 0 908001 14 5). The work of this gifted couple, members of the Boyd family that has been practising various art-forms for more than a hundred years, is rich in graffito designs; in addition, in most cases, like many other potters today, they have brought pots back into the kitchen, where they began as objects of daily use, to be loved and admired. Although sometimes they tend to use shape for shape's sake, the illustrations in this book and the accompanying text indicate thorough mastery both form and design and glaze.*





Paintings by T. K. Fitchett of Nairana *(left) of 3000 tons and* Kyarra *(right), of 7000 tons built in 1918 and 1903 respectively will make all those old enough to remember their long service and those who regard them as antiques beyond time feel pleasant nostalgia and, perhaps, some envy of a time before jet-lag. The paintings were photographed for* Hemisphere *Norman Plant of the A.I.S. They appear, with many other first-rate paintings and an informative text, in a book by T. K. Fitch about Australian coastal vessels from 1910 to 1960,* The Vanished Fleet *(ISBN 0 7270 0210 4), which is a collector's piece for collector of ships.*

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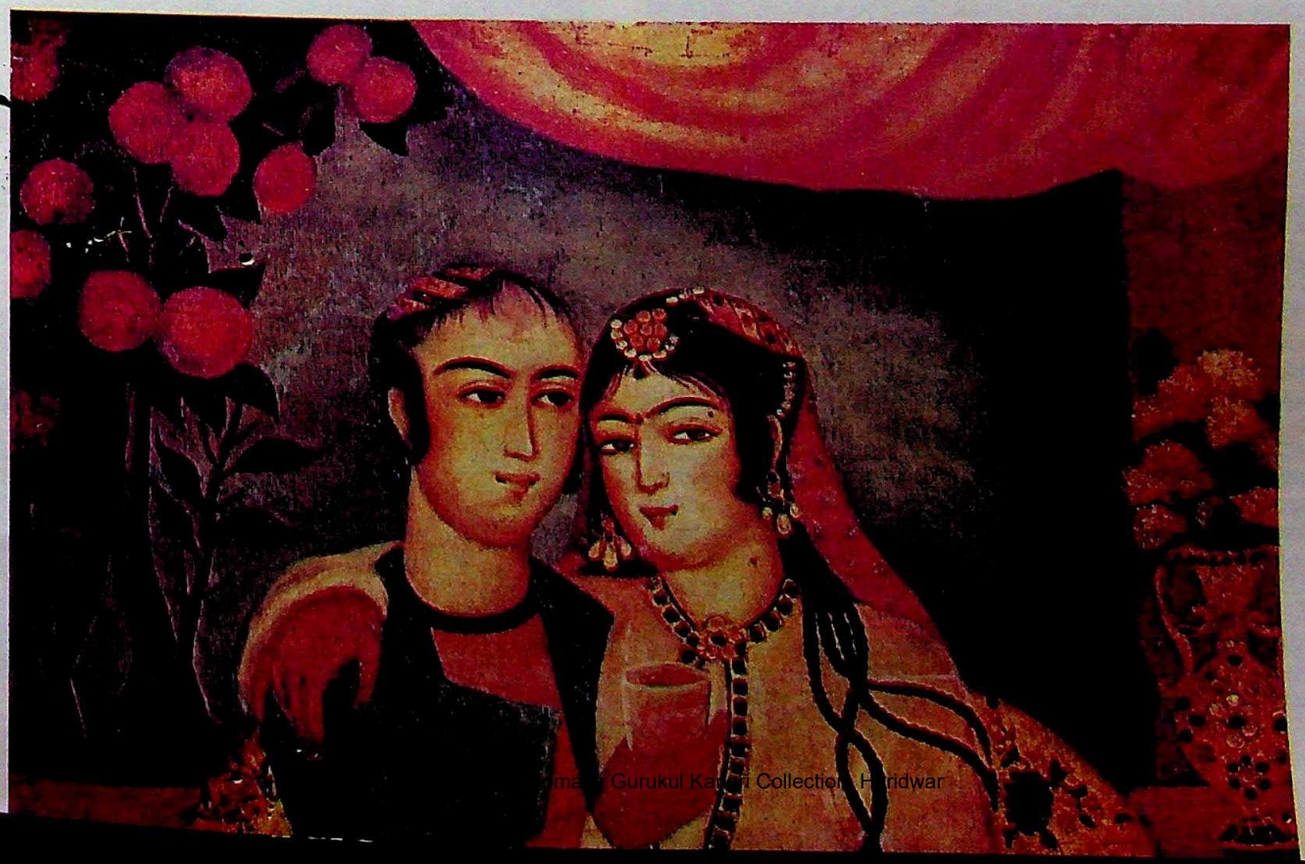
PAINTINGS FOR THE QAJARA

PERSIA, often the initiator, frequently the mingler of the arts and crafts and knowledge of Asia and the West, placed as it is on the great highroads of Central-Western Asia, has given rise to some of the most beautiful miniature painting in the world. In addition, the dynasty of the Qajars, a family which came to power in Iran late in the eighteenth century, produced, through its patronage, some of the stranger and yet appealing work joining the oil painting of Europe to its own idiom.

To the right, a prince of the Zand family, a tribe of some influence in eighteenth-century Persia, reading a book. The portrait, done in 1793-4, is arched, to agree with the shape of the niche in which it fitted; for most of the portraits in *Qajar Paintings* (by S. J. Falk, Faber and Faber/Sotheby Parke-Bernet Publications, ISBN 0 571 10128 3), were for the decoration of palaces and houses and pavilions.

The subjects of the Qajar painters ranged from decorative dancing girls and women acrobats to 'scenes from classics and romances', to those of lovers; the couple below, drinking wine arm-in-arm, were possibly painted by Muhammad Sādiq in the late eighteenth century.

The illustrations on this page are reproduced by gracious permission of Her Imperial Majesty the Empress of Iran, who owns the collection.



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HIDDEN HISTORY

The Past and Future People: Tradition and Change on a New Guinea Island, by Romola McSwain; Oxford University Press, Melbourne, 1977. xix + 197 pages, bibliography and index.

THIS BOOK is a study of modernisation and race relations in Karkar, a volcanic offshore island near Madang. The author, a social anthropologist, presents a summary account of the traditional culture and social structure of Karkar, followed by a detailed history of German, Japanese and Australian imperial contact. The principal emphasis is on Karkar Islanders' 'reactions' to the various agencies of change, both planned and adventitious, which came in the form of missionaries, planters and administrators. Three of the longest chapters are devoted to Karkar responses to the economic, political and educational development programs promoted by the Australian administration between 1952 and 1968.

The account is sequential, logically developed and exhaustively documented. If it seems to deny the Karkar much choice in the way they have emerged from their past and now confront the future, this is excusable as an artefact of the historical materials — which are those of Europeans, and which thus inevitably impose the view that the islanders are merely acted upon from without. But the anthropological viewpoint is (or should be) one that seeks to comprehend what the people make of what others make of them: and herein lies the main interest of the book. The author sketches, but does not entirely elucidate, the hidden history of Karkar, which might be seen as a series of attempts by the islanders to regain their destiny according to their own legitimating theories of the nature of man (both black and white) and the sources of knowledge, power and material wealth. Such theories conform to the general pattern of 'cargoism', a prevalent ideology which provides sanction for cargo cults, those peculiarly Melanesian experimentations with religious means to achieve secular ends.

Karkar people themselves have created their own unique and wondrous synthesis, a thoughtful welding of traditional beliefs in culture heroes and ancestral spirits with an assortment of Christian dogmas. For example, Noah is identified as a culture hero who built a canoe; cataclysmic events will herald the millennium, a day of judgement on which will arrive the long-awaited cargo — the secrets of which were appropriated by whites when they sacrificed Jesus Christ. Cargoism, then, is pervasive on Karkar, 'ranging in intensity from fanaticism to equivocation' (a statement which, incidentally, holds good for much of Madang District, not to mention the rest of seaboard Melanesia).

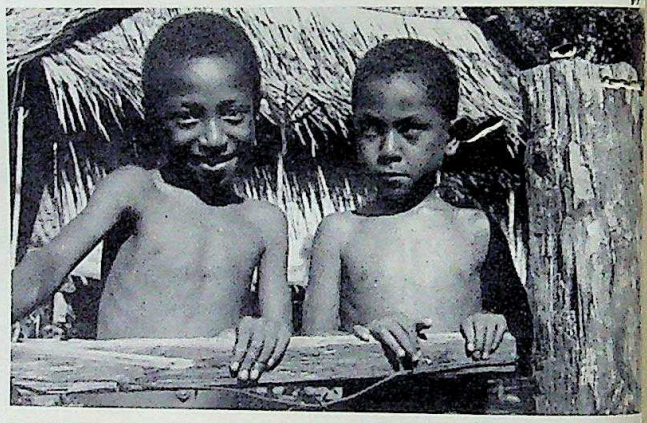
Karkar, however, is remarkable for the 'spectacular progress' it has made in the development schemes proposed by the Australian administration. So the intriguing lesson of the book is that cargoism is neither incompatible with nor made redundant by progressive economic and political developments and the expansion of horizons through education. Cargoism does not necessarily wither away (as many writers have assumed it would) once a modest measure of modernisation is achieved. Pragmatic, secular thinking can comfortably co-exist with the 'religious' thinking of an indigenous heritage. It is 'epistemological systems' which are at variance, and less than a century of exposure to European ways (selectively screened as they have been) is insufficient time for the root assumptions of the traditional world-vi[ew] to have been decisively undermined.

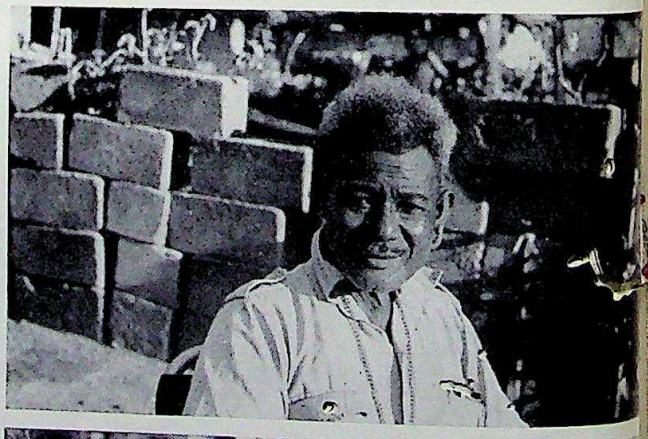
Such demonstrations are well worth making. A weakness of the book, however, is that it offers only the most general functional theory as to why cargoism persists. But there is a circularity here, for the 'epistemological intellectual system' cannot be both an explanatory principle and a datum of study. In this respect the author finds herself unable to go beyond the point reached by her teacher, Professor Peter Lawrence, who wrote a preface to this work and whose own book on cognatic cults in the Madang region, *Road Belong Cargo,* is a classic in its field.

MICHAEL YOUNG

Dr Michael Young is a Fellow in the Department of Anthropology, Research School of Pacific Studies, Australian National University.

Youngsters, who make up a large part of the population of Karkar; Kabug, a village Magistrate; grandparents, according to the book's author, have a very close relationship with the children of their own sons and daughters. (Photographs courtesy of the author.)





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Newspaper Subeditor

he's like the rest of them,
quiet as the edges of a pencil.

the years have worn him
to a soft, even lead.

he must have been an eager cadet, once
scrutinised with quick heart
his first handiwork, the masterpiece

of victory won dear from
his hawking chief's jealous domain.

perhaps he drowned in words, saw
his soul mirrored deep in faces of type,

this one a square candour,
that a skinny compromise.
heard each vibrate its peculiar tune.

music, perhaps, made him stop here,
in this smooth corridor of time
to settle into fine contours.

has it spun unbroken so long
that the world is flat against its sureness?

he stops working now, pencil inert,
sheltering in the interstices of time.

there is coffee in his wife's flask,
and the rolling hours push up against him

he rubs his eyes, is tired.
oh what mottled dreams lie jumbled behind them,
far, far lives away

—GERALDINE HENG

(Photographs courtesy Cassell Australia).

LATEST AND FIRST

OXFORD UNIVERSITY PRESS (Kuala Lumpur) is to be congratulated on bringing to light again a translation of the first catalogue of Chinese porcelain ever made by Chu Yen, an official in the province of Kiangsi. The work, produced in 1774, was based on art objects which the author and his friends actually possessed, and listed 'in order that I may preserve them from being lost or forgotten . . . Let no one . . . taunt me for having produced what is fit only for a child's toy'. The work was translated by Dr. S. W. Bushell, the British Legation doctor, and first published in English in 1910; the Oxford University Press reprint, titled *Chinese Pottery* (ISBN 0 19 580372 8), remains the only complete translation of the work in a Western language.

TURANDOT, in a peacock robe, representing a China as imagined in an opera by the Italian Puccini presented by The Australian Opera in 1971, and, above, a scene from *Superman*, a 1974 Australian Ballet production of a work by Julia Cotton—two scenes from *Opera and Ballet in Australia* by John Cargher, well-known in Australian musical circles and General Manager of the National Theatre in Melbourne. Some readers will regret the puns, to which Australians have got accustomed through his programs for the Australian Broadcasting Commission, but all will respect the breadth of the book, which covers stage performances in Australia from the beginnings of opera here in the early 1800s to the present day. Richly illustrated, beautifully laid out, the book, of three hundred and fifty-two large pages, is a credit to its publishers, Cassells Australia.

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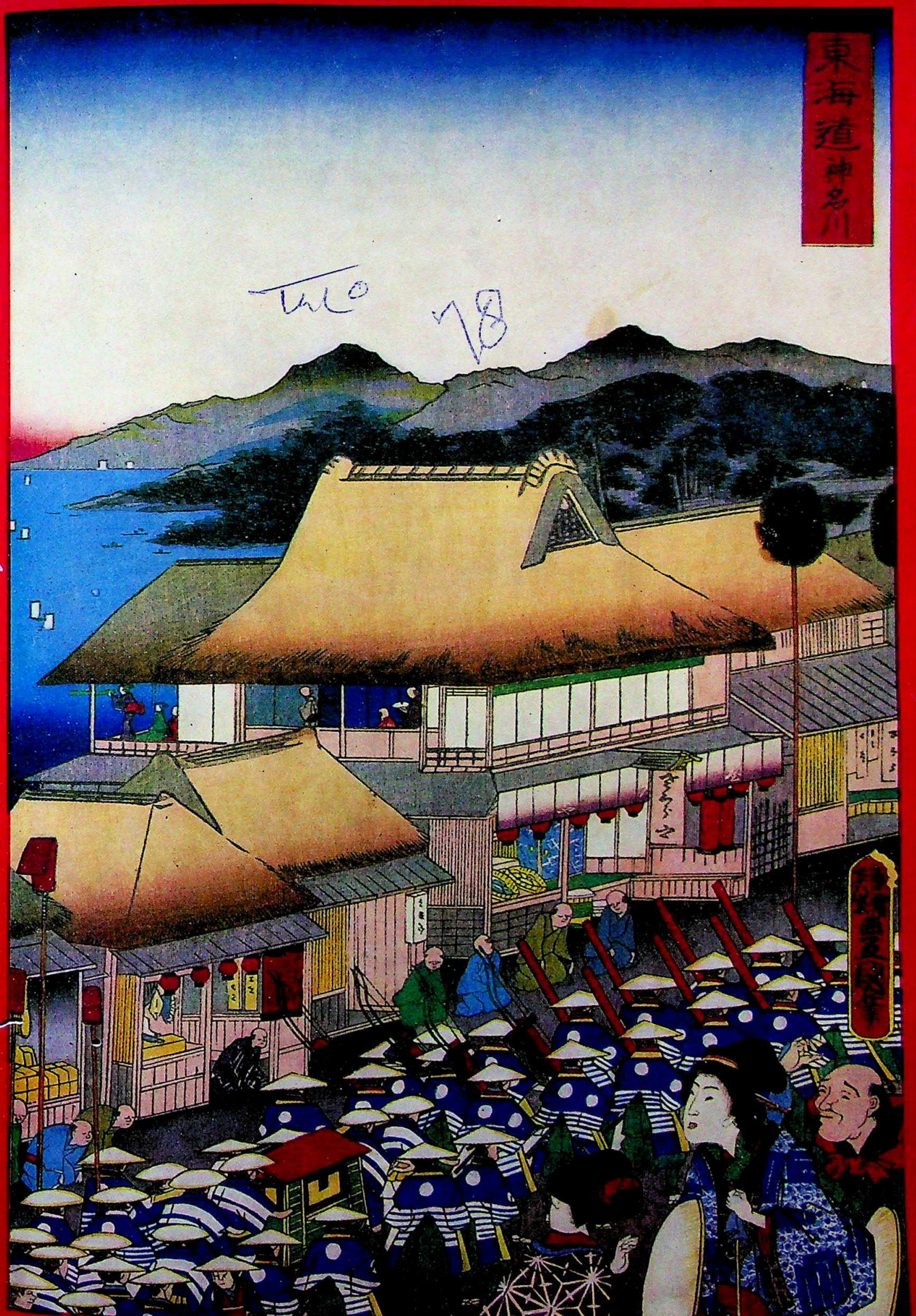

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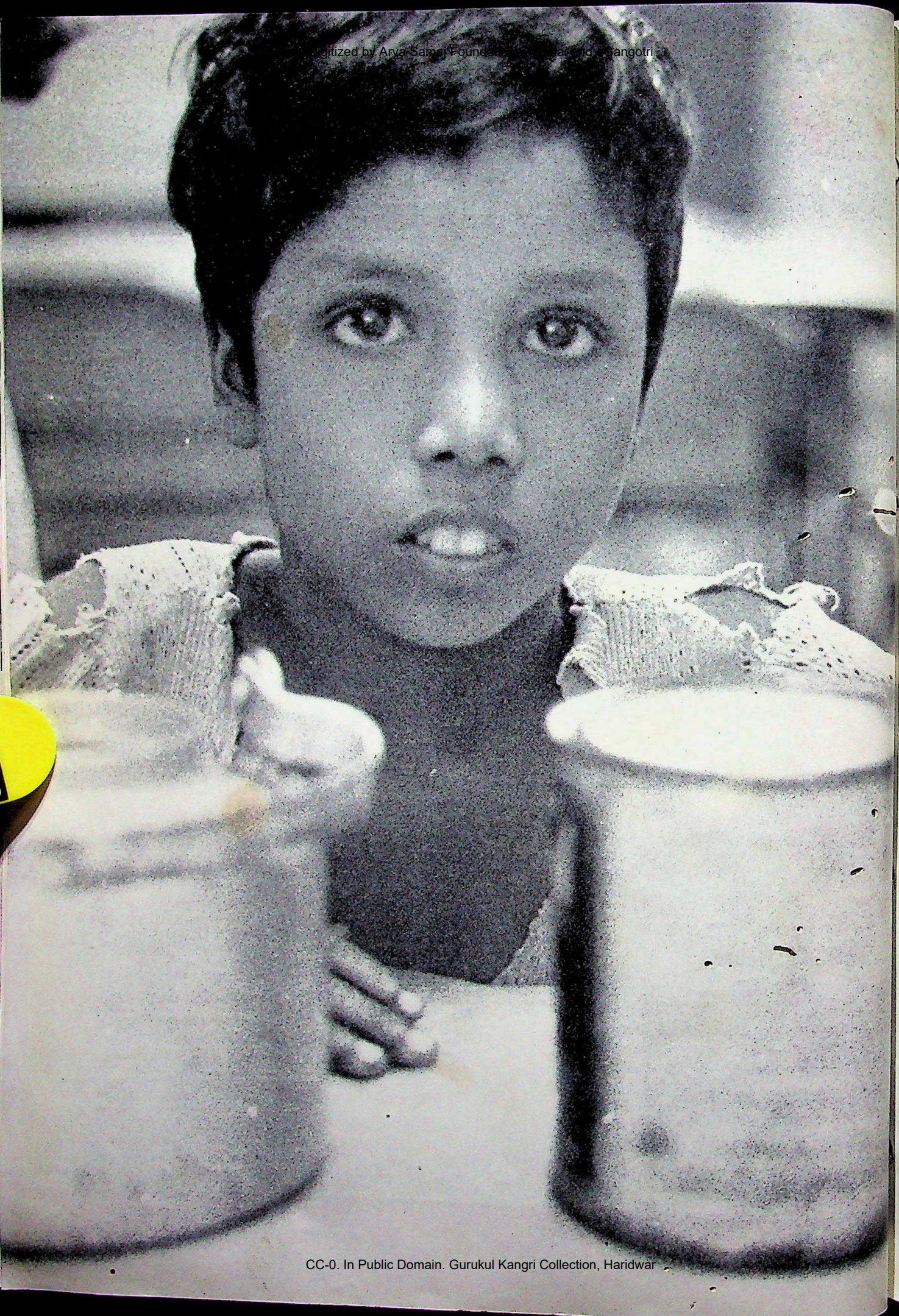

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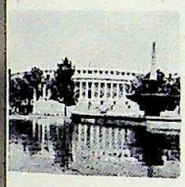

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OPPOSITE: *Calcutta boy. (Photograph by Arun Ganguly.)*

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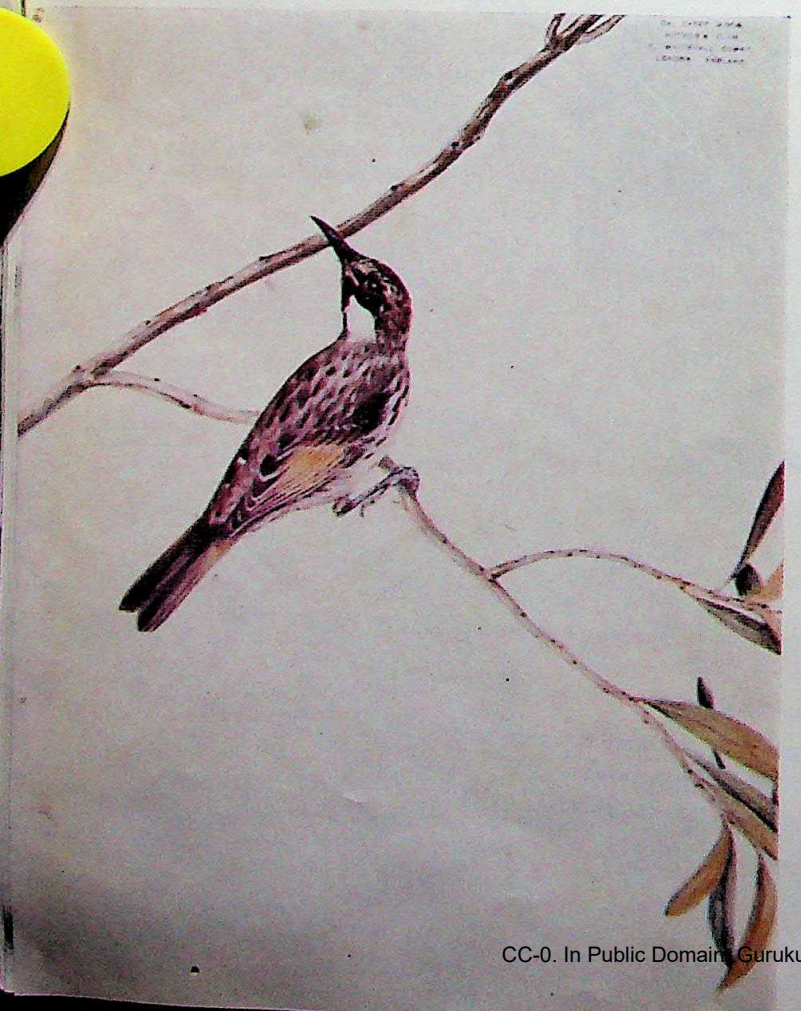
'GOODNESS . . . NE

An account of the man who made Australia's first natural book,—in fact, the first illustrated book to be publishe He was John William Lewin, the first of whose hand-c etchings of Australian birds that we know about is date

ten years ublish a Britis is the first

Anti-clockwise: Red-browed finch (Emblema temporalis), *signed Lewin; White cheeked honeyeater* (Philidonyris niger), *signed E. W. Lewin, N.S.W. 1800; Rufous songlark* (Cinclorhamphus mathewsi), *signed J. W. Lewin; White cheeked honeyeater* (Philidonyris niger), *signed J. W. Lewin.*



IN THE great ornithology library of McGill University, Montreal, a cryptic catalogue entry led me to a fi leather-bound album, once the property of Lucy, Duche of Egmont. The binding suggested these were amateuri bird paintings by a Victorian aristocrat, but I opened t volume to find a superb rendering of a triller on a eucaly branch. Here were paintings and drawings of Australi and Brazilian birds in the unmistakable style of Jo William Lewin, some signed and with the year or 'N.S.W added, bound at random with some seventeenth-centu *trompe l'oeil* paintings of birds' eggs.

But none of the eight Australian bird paintings h been used for the engravings in any of the four editio of Lewin's rare *Birds of New Holland with their Natur History*. Here in Montreal were some unknown origin paintings by one of Australia's early resident naturalist the first to publish a natural history book in the colon

The Brazilian birds, drawn from specimens in Brita are stiffly perched on leafless nondescript stumps, already hackneyed eighteenth century convention. But those painted in New South Wales between 1800 and 18 drooping eucalypt twigs and sprays of flowering grevilli support the birds in naturalistic postures. The paintin reproduced here display all the lively charm whi distinguish Lewin from other bird artists of his day.

John William Lewin, born in 1770, was a son of t artist and naturalist William Lewin, famed for his illu

trated des Between volumes c coloured *Birds of G* the help plates ca assisted w

In his t to emigrat was arrivi acquainted Latham an and the g name illus must have resources to seek su and the er sored by t arranged t during his equipment agreement

Drury's colonist ha the door, mahogany

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. . . NEW WORLD'

ten years after Governor Phillip had come to Australia to blish a British penal colony in what is now New South Wales. is the first time that these engravings have been reproduced in magazine form.

RICHARD BARWICK
Dr Barwick is a Senior Lecturer in zoology at the Australian National University. He took the photographs of the original etchings held at McGill University, Montreal.

trated descriptions of the birds and eggs of Great Britain. Between 1789 and 1794 he had published seven folio volumes containing three hundred and twenty-three hand-coloured plates. An eight-volume second edition of his *Birds of Great Britain*, completed by 1801, acknowledges the help of his sons John William and Thomas. Some plates carry their signatures and probably they also assisted with the laborious hand-colouring of each plate.

In his twenty-eighth year John William Lewin decided to emigrate to Australia. A steady trickle of specimens was arriving from the new colony, and he must have been acquainted with the ornithological descriptions of John Latham and the engravings of George Shaw, F. P. Nodder and the great Thomas Bewick. The chance to make his name illustrating the flora and fauna of a new continent must have been a powerful incentive. Lewin, almost without resources except for his family's artistic reputation, had to seek support from wealthy patrons such as Lady Arden and the entomologist Dru Drury. Somehow he was sponsored by the Duke of Portland, then Home Secretary, who arranged that the young artist be given government rations during his stay in the colony. Drury supplied money and equipment (to the value of £56.10.6) in return for a formal agreement to send insects from New South Wales.

Drury's surviving accounts suggest that the prospective colonist had to plan for every eventuality. Guns and shot; the door, gate and shutter hardware for a small house; mahogany insect cabinets, note books, collecting-jars,

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pins, cork, quills, knives, nets, dissecting instruments and innumerable other necessities for collecting were packed in stout wooden chests. Certainly the fifty-two copper plates, costing eleven pounds, prove Lewin's intention to engrave illustrations of the specimens he collected, but the gold scales and 'sundry crucibles pans & fluxing pots' also included suggest that Lewin had ideas about other sources of fortune.

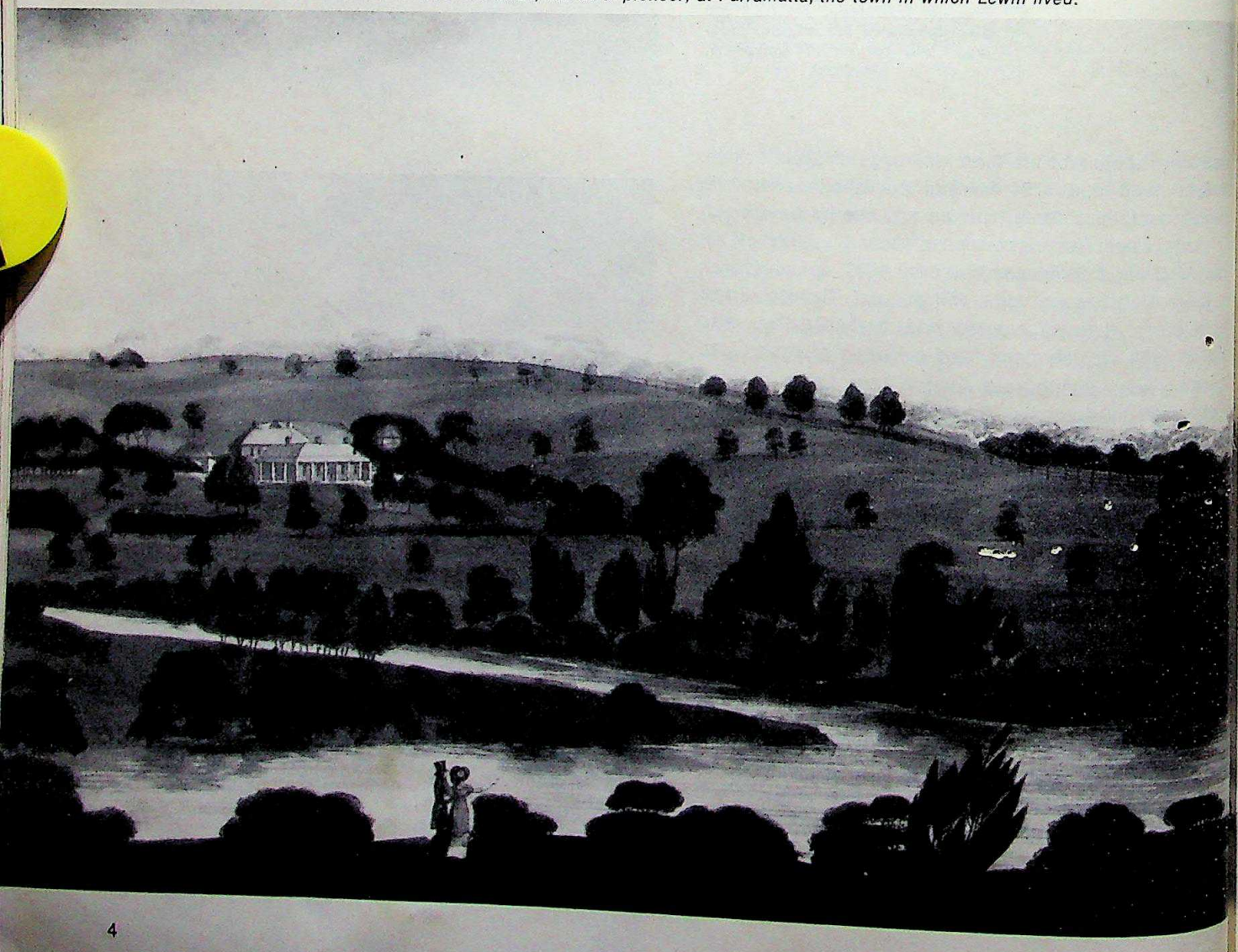
By mischance Lewin's wife Anna Maria had to make the 1798 journey alone (possibly because he had left the ship to seek further funds from Drury) and she was alone in Sydney for eight months until he arrived on 11 January 1800. He loyally supported her in a much-publicised slander action, and the court upheld her innocence of any 'impropriety' during their separation. The volatile convict John Grant (a close friend from 1804, who may have helped Lewin with the text of his ornithological volume) later reported that 'she preserved her character and is looked on as a phenomena'.

The reunited couple settled at Parramatta, and although six months' illness delayed his work for Drury, Lewin soon began painting birds as well as insects, and took eve opportunity for exploration and collecting. A journey Bass Strait in March 1801 ended disastrously when ba weather forced the longboat to return, but in June an July he took part in a survey of the Hunter River, and November joined an expedition to Tahiti to obtain sa pork for the hungry colonists. Shipwrecked at Point Venu the crew found a precarious refuge with missionarie as Lewin reported to Drury:

> . . . after we got on shore we had the natives to figh for they were at war with the party that were our friend so that for nine months that we was on the island w were continually alarmed with Dreadful Ideas of o having our throats cut: & I have not the least doub but we should have been all massacred & the missionar intirely destroyed or at least forced to fligh to th other Island at the risk of being Drowned only for few of us who well new the use of fire arms. As fo those dastards, called missionary they would have ru and hid themself rather than fight or protect ther property and wife & c.

Despite these hazards Lewin made portraits of som Tahitian nobles and preserved a collection of insects

The house of John McArthur, the wool pioneer, at Parramatta, the town in which Lewin lived.



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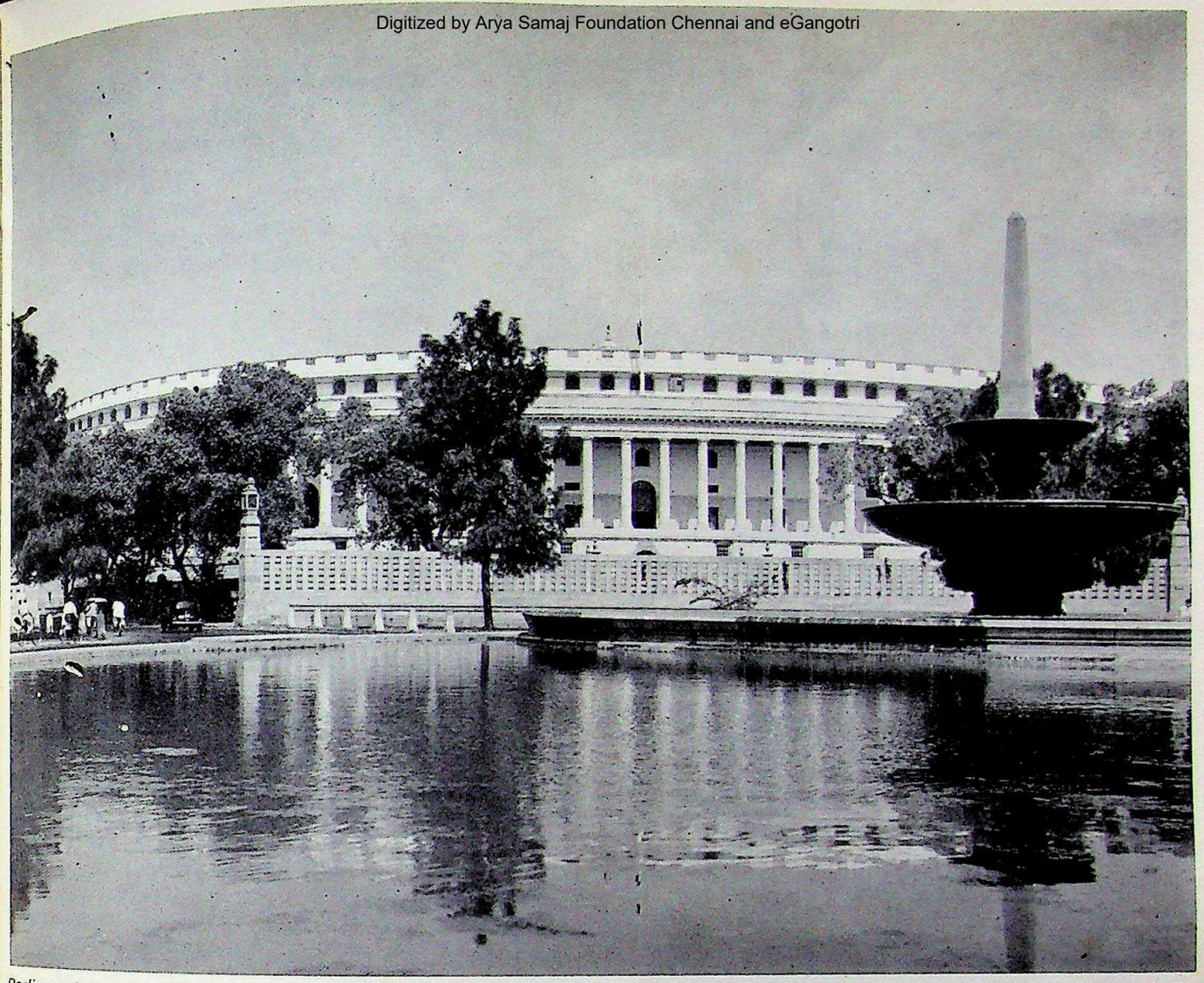

Parliament House, New Delhi, by Sir Edwin Lutyens, an English architect who designed several major buildings in the Indian capital, providing another link, in another medium, between the British and India. (Photo courtesy Government of India Tourist Office, Sydney.)

THE PEDIGREE OF NATIONS II

Shiv Kumar

EVEN though the Indian Constitution has not so far included English among the Indian languages, the Sahitya Akademi (the Indian National Academy of Letters, sponsored by the Government) has recognised it as a medium of creative expression in India, and several authors such as R. K. Narayan, Mulk Raj Anand and Nirad C. Chaudhuri, have received national awards for their writings in English. When, in 1967, Nagaland, one of the Indian States, adopted it as its official language, English also became a 'regional' language. So now, at the national and state levels, it has been absorbed into the Indian cultural *milieu*. This may account, in part, for an unprecedented upsurge of Indo-anglian writing in all genres — fiction, poetry, drama and criticism.

Indian writers in English now realise that their model need not be the Queen's English, or American English, but a variety of English all their own, susceptible to Indian sensibility and to the syntactical and lexical elements in many regional languages. Unlike the Baboo English of the late nineteenth century, this new variety eschews excessive ornamentation, naive hyperbole, Latinised diction and Victorian formalism. In many respects, in fact, it has achieved a close approximation to standard English, especially as a written, if not spoken, language.

Used as a supple instrument of imaginative writing, it has acquired a dignity and grace that is unmistakable. Of course 'there are many clichés, and much claptrap in Indian English,' observes Mulk Raj Anand, 'but, somehow,

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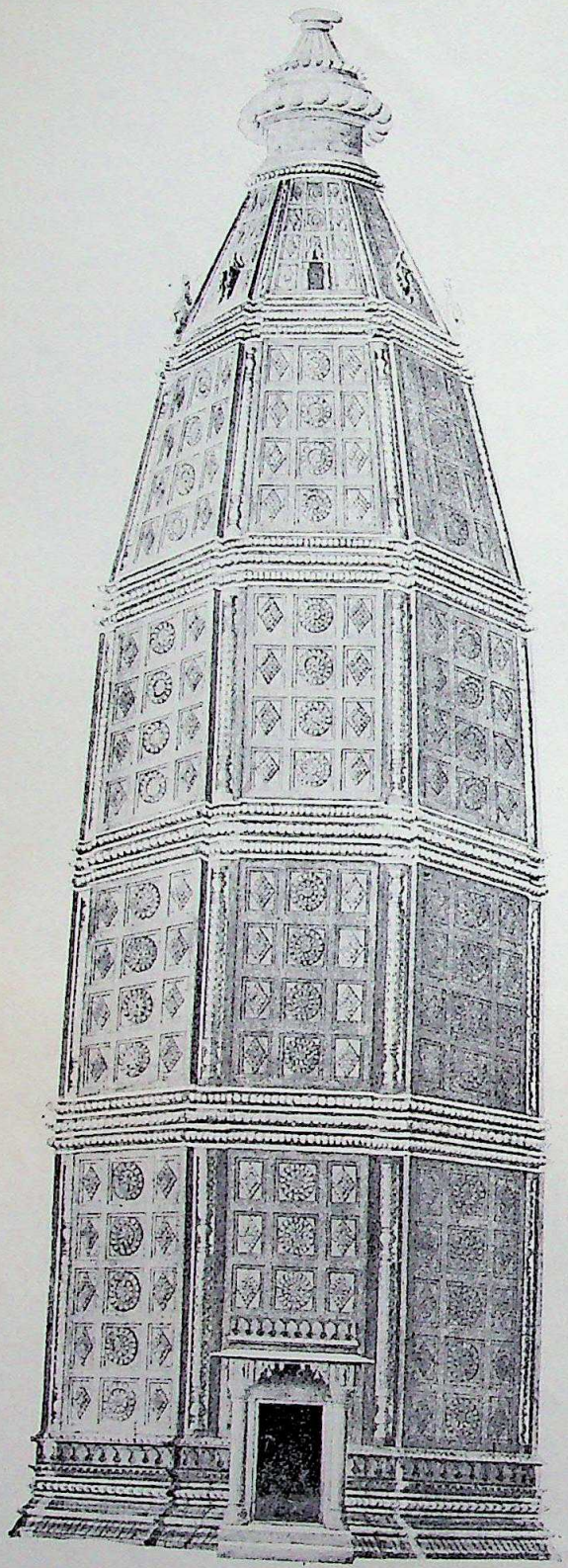

Indian painters began to adopt European styles after the coming of the British: one example is this wash drawing by an Indian artist done about 1837 of the Madan Mohan Temple, Brindaban, Uttar Pradesh. (Photo courtesy the Royal Institute of British Architects.)

it sounds quite pleasant except to the snobs; and so lon as it remains grammatically more or less correct, it evolving into a distinctive style of its own. The sam writer has now suggested a new name for Indian Englis — 'pigeon English', not pidgin English — 'as it ofte seems to me to carry the metaphor of indigenous poetr and soar with the imagination of the many gifted write we have produced.'

It is this English that is now increasingly attractin the attention of such Indian and foreign linguists as Bra Kacchru, S. K. Verma and J. R. Firth. There is now special cell at the Central Institute of English and Foreig Languages (note the implicit recognition of English a an Indian language) in Hyderabad for research into th linguistic and stylistic peculiarities of Indian English (o Indlish). Inevitably, this approach is often socio-linguistic o psycho-linguistic, because the language is born of accu turation. Indian English is, therefore, to be understood a a kind of language used by 'English-knowing bilingual' in an Indian cultural and linguistic setting.' Its distinctive ness lies in its flexible approach to tense and pronomina proprieties in the embedded clauses and sentences.

As a spoken language, Indian English has many pro nounced phonological features deriving from the native speaker's inability to overcome the gravitational pull o his mother-tongue. And, not infrequently, Indian writers mostly novelists, have attempted literal translation o Indian forms of abuse ('You eater of your masters') greeting ('bless my hovel with the dust of your feet') salutation ('cherisher of the poor'), or flattery ('O Maharaj, we are all lickers of your feet') to achieve 'Indianness' in expression.

But there is one fundamental distinction between Indlish and any other variety of English: the Indian mind, in its innate fluidity, often tends to be quick-paced, and the speech verbose and repetitive. In a sense, writing of this kind strives to respond to the mobile contours of the psyche, which is what makes most of our fictional writing read like a stream-of-consciousness narrative. In his introduction to *Kanthapura,* Raja Rao expounds his theory of the Indian 'tempo':

> After language the next problem is that of style. The tempo of Indian life must be infused into our English expression, even as the tempo of American or Irish life has gone into the making of theirs. We, in India, think quickly, we talk quickly, and when we move we move quickly. There must be something in the sun of India that makes us rush and tumble and run on.

Raja Rao proceeds to justify the Indians' use of English as a medium of imaginative writing, in spite of the difficulties that are attendant upon it:

> One has to convey in a language that is not one's own the spirit that is one's own. One has to convey the various shades and omissions of a certain thought movement that looks maltreated in an alien language. I use the word 'alien', yet English is not really an alien language to us. It is the language of our intellectual make-up—like Sanskrit and Persian were before—but not of our emotional make-up. We are all instinctively bilingual, many of us write in our own language and

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English. We cannot write like the British. We should not. We can write only as Indians. We have grown to look at the large world as part of us. Our method of expression therefore has to be a dialect which will some day prove to be as distinctive and colourful as the Irish and American. Time alone will justify it.

The same aesthetic stance is evident in several Indo-anglian poets, particularly Kamala Das, who is aware of the need to synthesise two diverse cultures, two distinct patterns of emotional response to human experience. While she writes in a language that is 'half-English, half Indian', she also tries to create a sense of indeterminate fluidity of expression—the Indian tempo—that often makes her verse run on like a natural spring.

The language I speak
becomes mine
Its distortions, its queernesses
all mine, mine alone.
It is half English, half Indian,
funny perhaps, but it is honest.
It is as human as I am human
Don't you see?

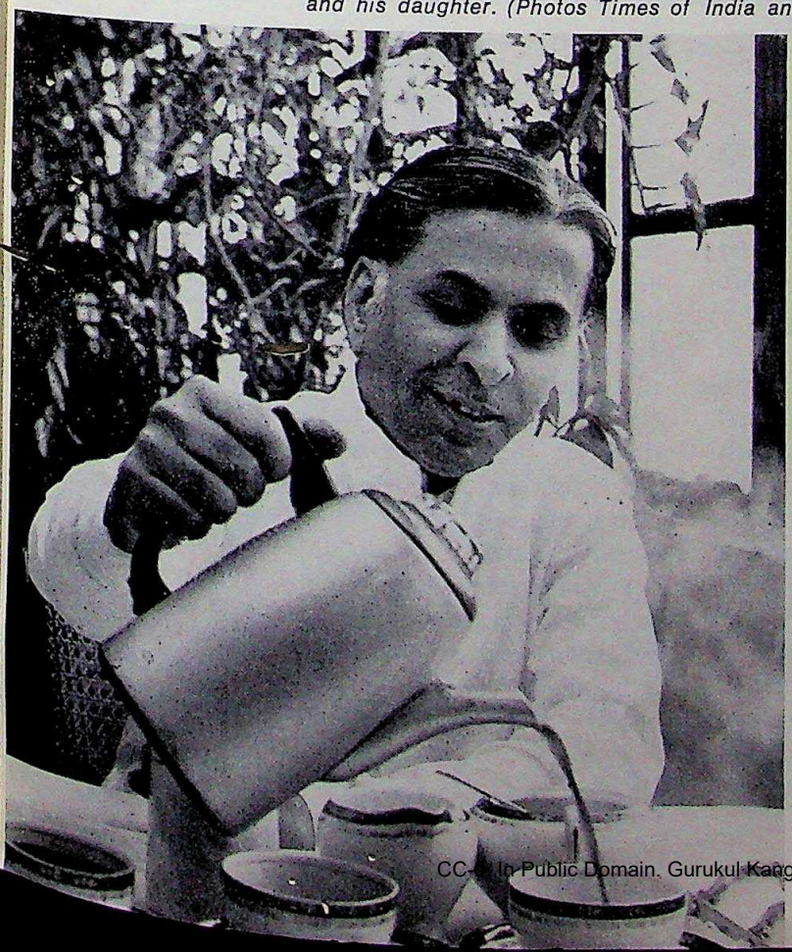
(*Summer in Calcutta*)

In drama, the weakest part of Indo-anglian literature, however, English appears to be an impediment. The spoken word on the stage often sounds ponderous, lacking the involuntary ease and flow of the native idiom. The phonological usage of a Bengali, Punjabi, Gujarati or Maharashtrian speaker is often too pronounced to be ignored. It is, therefore, on the English stage that India assumes the dimensions of a vast land with baffling linguistic diversities. This, perhaps, partly explains the comparative paucity of Indian plays in English.

But in spite of certain inevitable inadequacies of Indlish as an instrument of creative writing, it is gaining ground in India. During the past decade or so, there has been a renaissance of Indian writing in English. Many Indo-anglian poets, novelists, and critics have achieved publication in the United States, England and Australia, not as practitioners in a sub-standard variety of English but as writers with an authentic voice of their own. The view of their detractors that Indians cannot write creatively in English is no longer taken seriously.

Controversy raged over the use of English, however, in the early 'fifties and 'sixties. In 1951, only four years after independence was gained, the *Sunday Standard* ran a series with the title 'King's English and Indian Republicans'; and quite a few of the commentators tried to debunk Indian literature in English as a relic of Anglomania. But the first salvo with seemingly laser precision was fired by Jyotirmoy Dutta in an article for *Quest* in January 1961. He compared Indo-anglian writers with 'captive chaffinches' who would never reach 'the full range of sounds of the wild songster'. English was not even the language of the educated few in India. It was used only to describe facts, figures and things, and to give commands; not to suggest feelings but to communicate ready-made ones. Two years later, Buddhadeva Bose, the Bengali poet and critic, lashed out. Indo-anglian poetry, he said, was 'a blind alley, lined with curio-shops, leading nowhere'.

The writer Raja Rao and, on the swing, M. C. Chagla, a former Indian Education Minister, also a staunch supporter of English, and his daughter. (Photos Times of India and Mahendra K. Khanna.)



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Purchasers in a Delhi street browse through newspapers and magazines (mostly in the English language) before buying, a everywhere else in the world.

Then came John Wain. He described English in India as 'just a lingua franca', lacking 'the fineness of nuance that makes literature possible'. He remarked that, if he were an Indian writer, he would most certainly prefer 'to write in Marathi and let the big sales and wide publicity take care of themselves'.

The truth of the matter is that it is not the lure of big sales or wide publicity that has drawn many Indian writers to English. For example, A. K. Ramanujan, a poet in English and Kannada who has been widely published in the U.S. and England, observes: 'I just happen to write in English; it is for others to say whether it is any good or not . . . I don't think people who write have a choice in the matter'. He adds that he doesn't know what is meant by 'the inconceivable loss of the mother-tongue', or that 'English is not an Indian language'.

Another writer, Pritish Nandy, is aggressive: 'Yes, Indian writing in English is the result of Anglo-mania in the same sense that such writing in Bengali is the result of Bengalo-mania. There is and can be only one circumstance, one motivation for writing in a particular language: one love the language and feels like expressing in it.'

Another factor that may have saved English from neglect is the recognition, however subdued, of its usefulness by the Government. The Official Languages Act passed by the Indian Parliament on 16 December 196 explicitly states that 'English shall be used for purpose of communication between the Union and a state which has not adopted Hindi as its official language; and when Hindi is used for purposes of communication betwee one state to another which has not adopted Hindi as it official language, such communication in Hindi shall b accompanied by a translation of the same in English'.*

But a language does not thrive on bureaucratic approv alone; its popularity can be explained only in terms of it intellectual and emotional appeal. Even a cursory surve of the publishing trends in India shows the unchallengabl primacy of English among the languages now used i

* *India*, 1969, pages 25-26.

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India. More books, for instance, appear today in English than in all the other regional languages put together. The leading newspapers and journals are brought out in English, and their total circulation eclipses the combined sales of those published in Hindi or any other Indian language.

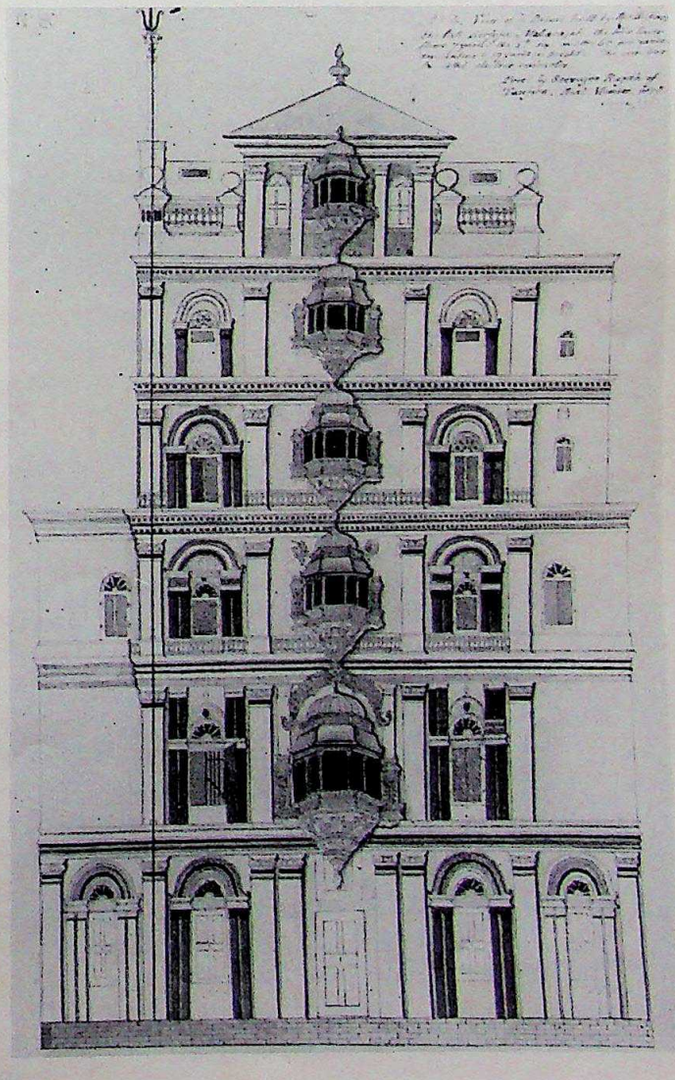
Besides being almost the only language of business and commerce, English has emerged as the exclusive medium of intellectual debate on contemporary social and political issues. This is because most of the newspapers and magazines published in Hindi or other Indian languages seem to cater only for popular taste through fiction or verse, hardly ever engaging themselves in any social or intellectual debate. According to a recent commentator: 'the clear pattern is this: while 99 per cent of books published in English belong to subjects of intellectual interest such as social and natural sciences, politics, culture, art and religion, 99 per cent of books published in other Indian languages belong to fiction, poetry, rarely drama'.

Even the belief that Hindi and other regional languages can each claim a distinct tradition of its own is being challenged by many discerning Indians. '"Curious as it may seem', observes Raja Rao, 'the writers in the regional languages look outward for inspiration and dialogue, and the writers in English look inward and to tradition'. Having saturated themselves with British, American and European literature, Indo-anglian writers are now drawn to the exploration of their own culture for self-expansion and illumination. On the other hand, regional literatures, long cut off from the tradition of world literature, are now more than ever before utilising newer modes of expression; the tendency is stronger than Western writers—even Indo-anglian writers—seem to suggest. Indian writers in regional languages are experimenting with the symbolist mode, the Eliotesque manner of ironical portraiture, the Joycean technique of internal monologue, or exhibiting the neo-critical concern with the poem's entology. These trends have already merged into tradition.

Mr. M. C. Chagla, a former Education Minister and a staunch supporter of English, has expressed the imperative need in the present situation for 'tact and understanding'. In a book called *Language and Unity*, he has cautioned against any hasty replacement of English by an Indian

The late Frank Moraes and his son, Dom, who lives mostly abroad. (T. S. Nagarajan.)

Another example of the British style in painting by Indians: the Palace of the Tanjore rajas, Tamil Nadu. (Photo courtesy the Royal Institute of British Architects.)



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language. 'Language can unite or divide, act as a bond or barrier. It should not become a wall of isolation . . . or the vehicle of regionalism which obscures the elementary fact that the whole is larger and more important than the part, and that our primary loyalty is to India and not to the particular region to which we might belong.'

There is now a persistent demand for English to be included in the Eighth Schedule of the Indian Constitution (which lists Hindi and all the regional languages), as it has become a part of the warp and woof of Indian thought and culture. A survey undertaken a few years ago indicates that at any one time at least twenty-five million students in India would be studying through the medium of English at levels from kindergarten to university. In fact, Frank Anthony observed, in the course of his presidential address to the All India Anglo-Indian Association in August last year, that 'English is in many respects more an Indian language' than any other regional language. 'Foreignness', he added, 'is a relative term—in a relative sense, English is also foreign to the British: the lineal ancestors of the English language were the dialects of the Angles, Saxons and Jutes who went as conquerors Britain and took their foreign dialects with them'.

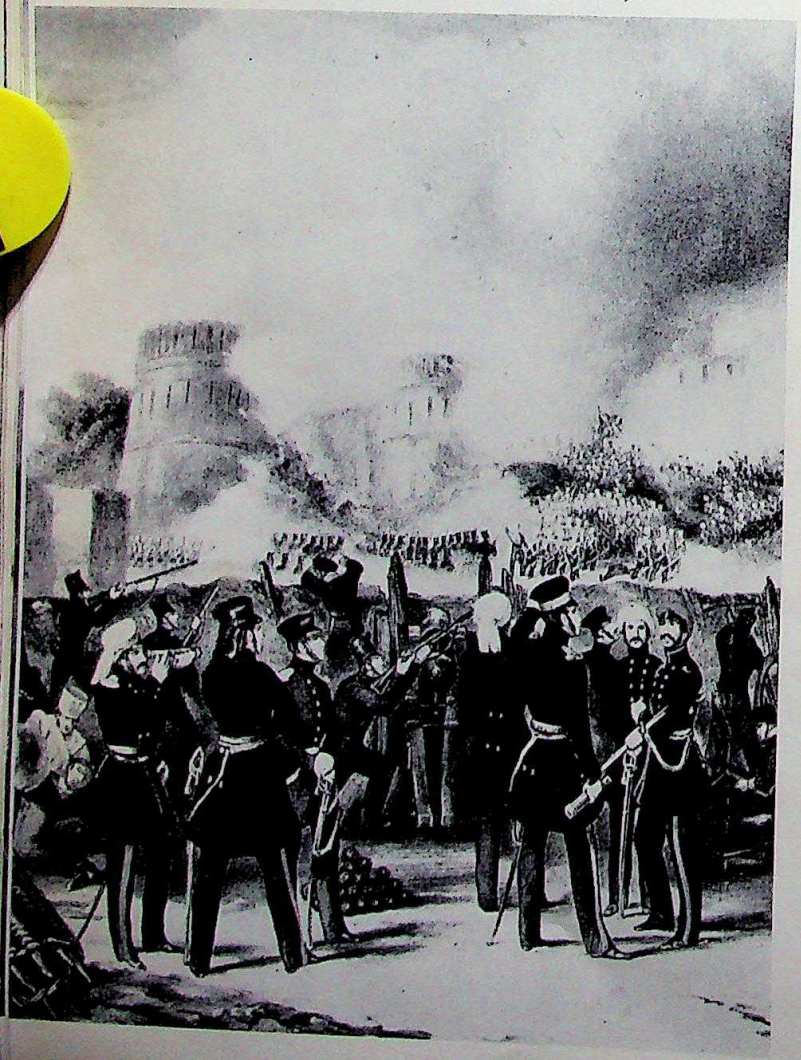
Indeed, it was in almost identical circumstances th English was introduced in India. If English came origina as the language of the conqueror, it has now be assimilated to Indian culture and tradition. And with su books as G. Subba Rao's *Indian Words in English* (Oxfo University Press, 1954) and G. B. T. Kurian's *Dictiona of Indian English* (Indian Universities Press, Madras, 196 the process of cultural interaction has been consummate

English seems likely to stay on in India.

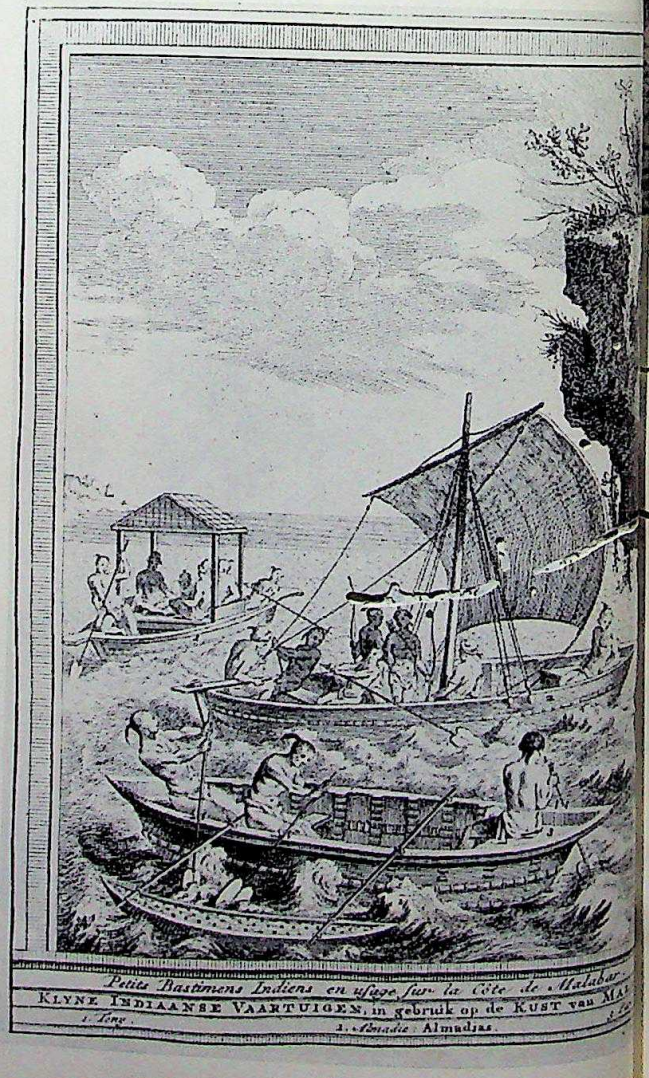
THE AUTHOR: *Shiv K. Kumar, an Indian poet, author and pla wright, is Professor and Chairman of the Department of Engl at the University of Hyderabad, India. He has been Univers Grants Commission National Lecturer in English (1971-72) a a member of the National Advisory Committee (English). He presently Commonwealth Visiting Professor of English, Unive sity of Kent, England.*

Articles previously published in this occasional series usages of English in various countries are: Singapore Englis Vol. 19 No. 4; Filipino English, Vol. 20, No. 2 and Australia English Vol. 20, No. 10. Part I of Professor Kumar's 'Th Pedigree of Nations' appeared in Hemisphere *Vol. 21, No.*

A further aspect of the British occupation of India: A detail from The Siege of Multan, *an engraving by J. Harris after a painting by H. Martens. (By permission of the Director of the India Office Library and Records, London.)*



An eighteenth-century image of Indian navigation: 'Little boa off the Malabar Coast', an illustration from a travel boo published in The Hague in 1747, reproduced by courtesy the National Library of Australia.



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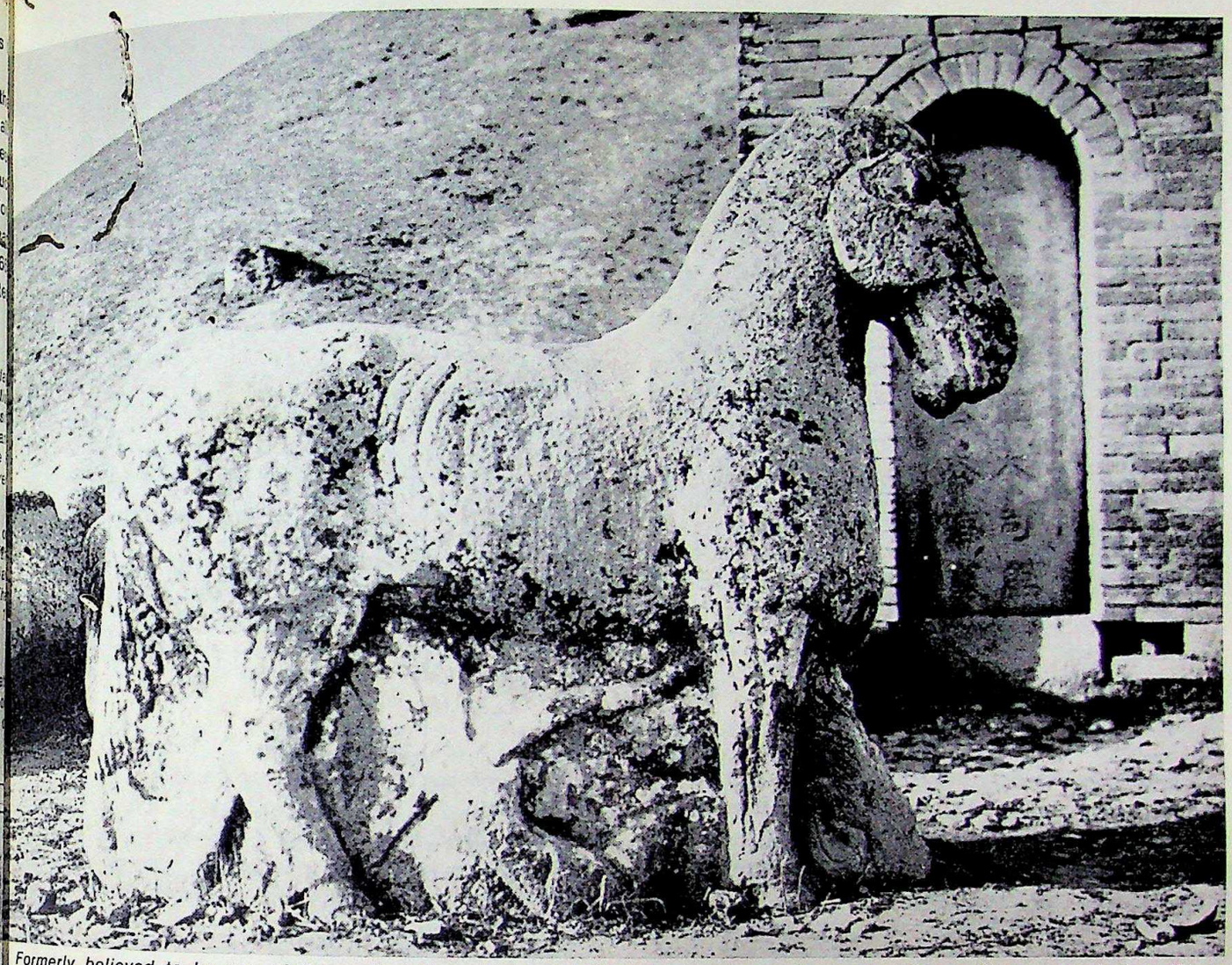

Formerly believed to be one of the earliest Han statues unearthed by Segalen: a horse trampling a Hiong-nu barbarian. (Photo Segalen, courtesy Menzies Library, Australian National University.)

'OTHER MEN'S FLOWERS'

(Montaigne)

Helen Reid

THE Australian Opera's premiere of Delibes' *Lakmé* in Sydney, 1976, revived romantic visions of Asia as seen through the eyes of visiting Europeans in the late 19th century. Like Puccini's *Madame Butterfly, Lakmé* was inspired by the highly successful novels of Pierre Loti.

Lakmé is the prototype of Loti's exotic heroine, a mysterious, haunting beauty who captivates the heart of the French naval officer, Loti, thinly disguised in the opera as Gerald, a British army officer. Their tragic love-affair, like that of Kipling's lovers in *Without Benefit of Clergy*, reveals the enormous gulfs of culture and tradition that seemed to separate East and West. The only way to resolve the romantic bridging of the cultural gulf was for the Asian heroine to die tragically.

Loti's lyrical impressions of Eastern civilisation lend themselves to the colourful dramatisation of nineteenth century opera forms; their extravagant, romanticised view of Asia is satirised in Gilbert and Sullivan's *Mikado*.

Western artists and writers have been fascinated by Oriental themes since Marco Polo related his fantastic tales of Chinese civilisation. However, in the late nineteenth century steamship travel, improved communications and imperial expansion brought renewed interest in exotic themes. Many impressionist painters, as well as such composers as Debussy, found stimulus in exhibitions of Asian culture which were staged in the capitals of Europe.

Tales based on travel in far-flung corners of the empire, by Loti, Kipling, Rider Haggard, Somerset Maugham and

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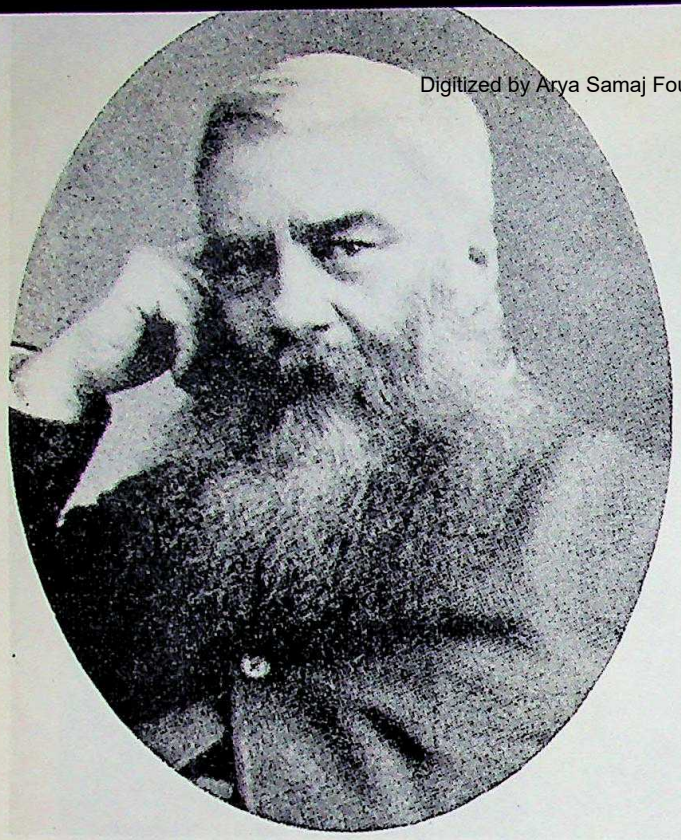

G. A. Henty, writer of adventure stories for boys.

H. Rider Haggard, author of King Solomon's Mines, She *and other exotic novels. (Photos courtesy National Library of Australia).*

others enjoyed great popularity. The 'exotic' literature of this period, extending from the late nineteenth century to the Second World War, adopts a number of very divergent approaches towards its Asian background.

At one level is the traditional European adventure or romantic story, set against an exotic background. There is little or no effort to understand the foreign civilisation or its people, who are often stereotyped as 'natives' of inferior morality. The early stories of Kipling reveal this racial bias. Other examples of incidental exoticism are Henty's *Through the Sikh War*; Maugham's *The Explorer*; Buchan's *Prester John*; and Forester's *The African Queen*.

In another type of exotic novel, the writer explores the question of cultural conflict. For example Kipling's *Kim,* in marked contrast to his earlier works, gives a sympathetic portrayal of India, without, however, any great depth of perception. Many of Kim's most admirable qualities are Indian. Ironically, there is no evidence in the text that Kipling condemns his final decision to become a spy for the West. The choice reveals the author's innate assumption of European superiority.

Loti's fleeting impressions of Asian grandeur or the poignant beauty of Tahiti rarely penetrate beneath the surface of the culture. Occasionally his subjective presentation of Asian civilisation is shallow and derogatory, as was his caricature of the Japanese in *Madame Chrysanthemum.* Like Kipling, Loti is a skilful story-teller whose work sometimes deteriorates into facile journalese.

Conrad's novels portray the isolation of the European in an unreal and hostile world—the jungles of the Congo, the Malay Archipelago, or South America. Like Kipling, Conrad is basically concerned with the struggle of the European to retain moral values and personal identity when he is cut off from his own civilisation.

In *A Passage to India* Forster gives a more profound insight into the conflicting values of two civilisations. Fielding, like Flory in Orwell's *Burmese Days,* is a humane and sensitive intellectual hero who protests at the prejudice, hypocrisy and shallowness of British imperialist rule. Kipling had seen the dangers of exploitation in areas which lacked the disciplinary control of dedicated imperialists. Conrad, Forster, Orwell and to some extent Rider Haggard saw the disastrous effect of replacing traditional structures and beliefs with the sterile concepts of modern materialism.

The novelists discussed so far are primarily concerned with European questions and values. Lafcadio Hearn was one of the first popular Western writers to show real empathy with the Asian point of view. In his *Glimpses of Unfamiliar Japan, 1894,* and later works, he sought to explore the spirit of traditional Japan, which was fast vanishing before the advent of industrialisation. However Hearn never succeeded in his great ambition of moulding his Japanese experience into some new form of fiction.

The concept of exoticism is broadened and developed into a new literary technique at the beginning of the twentieth century in the work of the French poet and novelist, Victor Segalen.

Segalen — naval doctor, archaeologist, explorer and writer — is one of the great Nietzschean figures of the turn of the century. Through a life of arduous physical exertion combined with intense intellectual activity, he strove to extend the limits of human potential. Because of his lofty conception of literature, very few of his projects saw publication before his untimely death in 1919, and much of his work has only recently become well known

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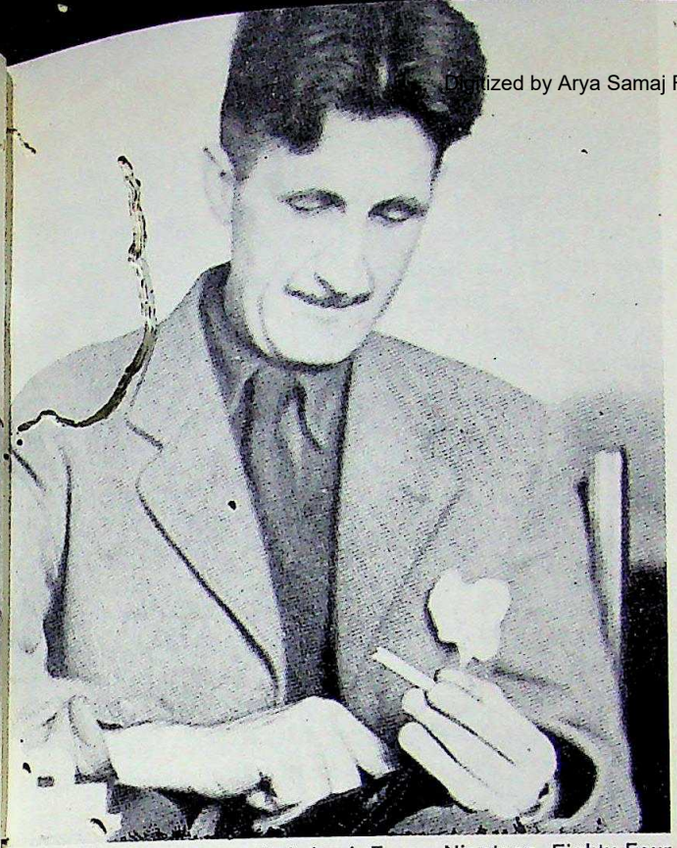

George Orwell, creator of Animal Farm, Nineteen Eighty-Four *and* Burmese Days. *(Reproduced by courtesy of Longmans, London.)*

Lafcadio Hearn, author of Things Japanese.

Segalen shared with Hearn, Gauguin and many artists of the period, a sense of disillusionment with European decadence and the monotonous conformity of industrial society. Writing in the wake of Rimbaud and Nietzsche, Segalen seeks to break through conventional barriers in order to develop man's faculties of awareness and creativity. In the words of Baudelaire,

> Plunge to the depths of the abyss —
> Whether it be heaven or hell —
> Plunge to the depths of the Unknown,
> To seek out what is *new!*

Exoticism meant for Segalen a quest for the unknown, the mysterious or diverse. Although he saw these qualities in all human situations, the greater part of his work is concerned with cultural diversity. He was conscious of the need to strip the term of its pejorative overtones of superficiality and cheap sensationalism, seeking to establish exotic art as a profound and imaginative discipline.

Segalen's exotic method, as applied to race and customs, involved intensive study of the language, people and civilisation through all available literature as well as through travel, and imaginative interpretation of his subject from the point of view of an indigenous narrator.

This technique had been employed by Montesquieu in his *Lettres Persanes* to satirise Western civilisation. However, the originality of Segalen's method lies in his effort to portray the attitudes, manners and cultural forms of an exotic civilisation from within, rather than through the eyes of an external observer.

This highly ambitious technique calls for thorough research, a highly developed imaginative faculty and a strong sense of personal identity, which allows the novelist to perceive inherent qualities of exoticism in his subject.

The sense of exoticism in Segalen's work comes from the shock of a different outlook or tradition which is taken for granted as the norm. We suddenly become aware of the relativity of our own customs and beliefs. The technique depends on a sense of distance and contrast between disparate ideas or civilisations. Hence Segalen is not encroaching on the territory of indigenous writers. In seeking to renew our sense of wonder and mystery, he owes much, like Baudelaire, to the work of Edgar Allen Poe.

In selecting the form of a Tahitian novel, a Chinese ode or stele, Segalen is presenting an ethnological study which incidentally casts our own civilisation in a new light. Similarly the prominent French critic Roland Barthes by his recent work on Japan, *L'Empire des Signes,* reveals the limitations of Western society.

Segalen's first novel, *Les Immémoriaux,* is written from the point of view of a Tahitian narrator, Térii. It opens with the arrival of Captain Cook at Tahiti, and portrays the destruction of Tahitian civilisation by disease, demoralisation and Westernisation. In contrast to Loti's nostalgic Tahitian love story, *The Marriage of Loti,* Segalen depicts the savage joy and cruelty of the Arioi, a privileged group of artists and actors who performed elaborate rituals of song, dance and orgiastic rites throughout the islands. Infanticide and human sacrifice were an inevitable concomitant of this life of spontaneous passion, a life which becomes the norm as seen by the Tahitians.

However, by the end of the novel, contact with the West, and specially with the missionaries, has destroyed the unique civilisation of Tahiti. Térii, the young Arioi who forgets the words of his prayer and later becomes a Christian, represents the majority of his people, 'les

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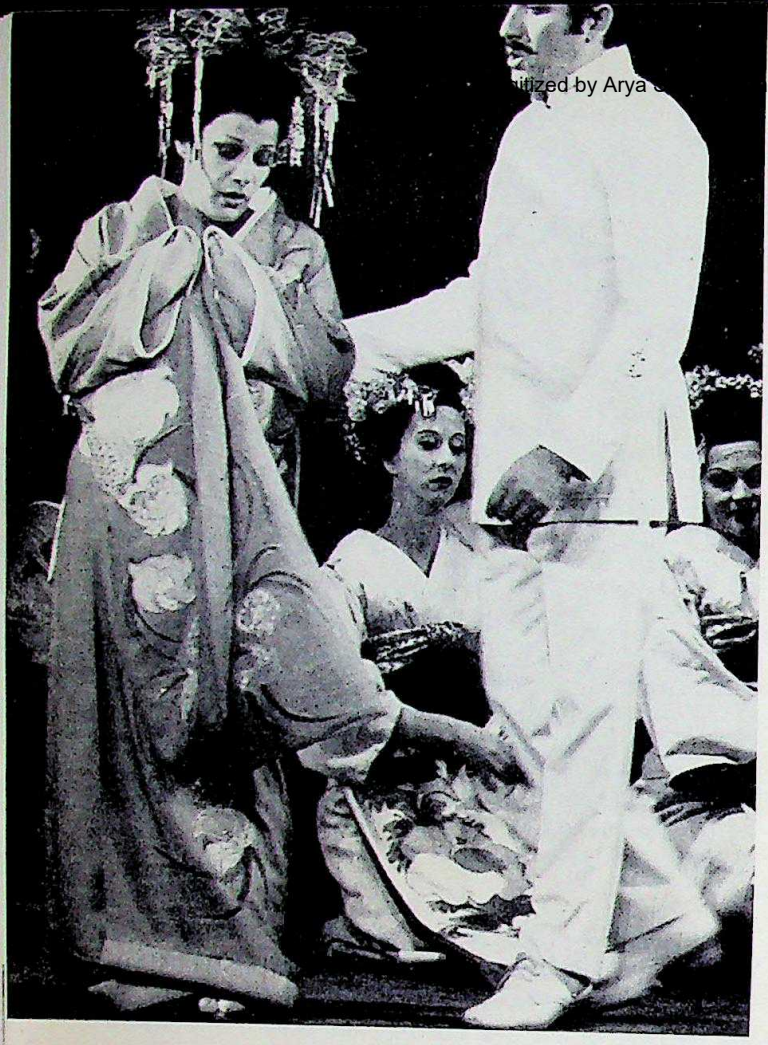

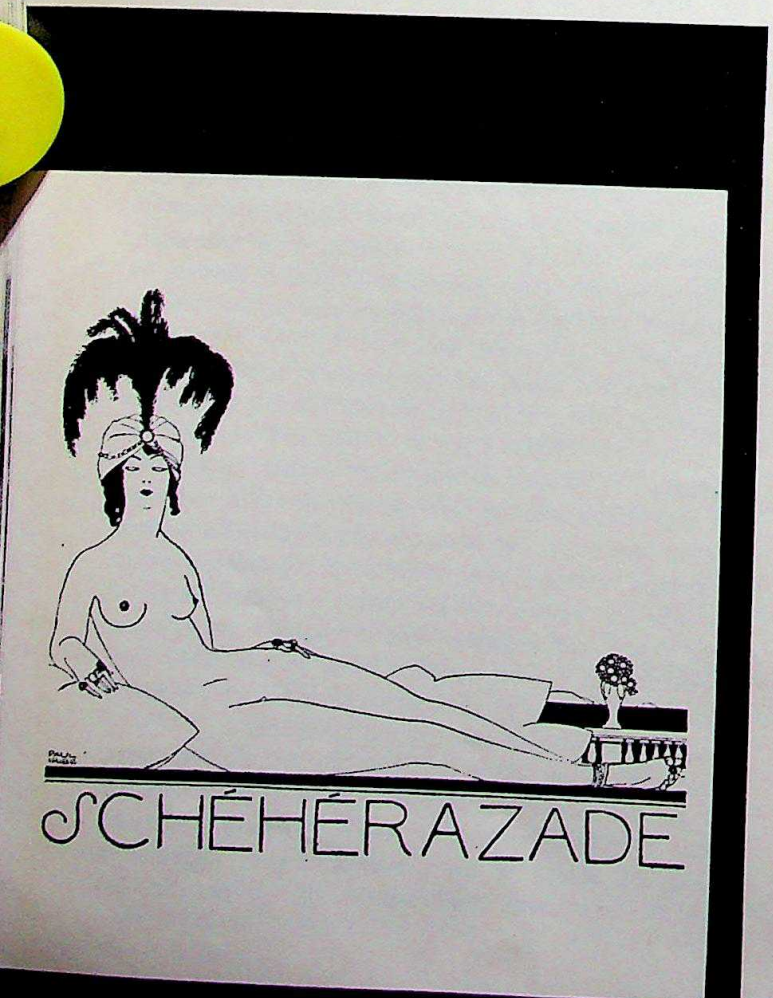

immémoriaux', who have forgotten a culture that date from time immemorial, and so have lost their own identity.

The culture of Tahiti represented the power of the spoken word. Once oral traditions were forgotten, there were no written records to preserve Tahitian history and culture. The Chinese ideogram, on the other hand, represented to Segalen the evocative power, permanence and aesthetic beauty of writing. Chinese calligraphy has inspired many poets and writers, from Lafcadio Hearn, Ezra Pound and Paul Claudel to, more recently, Roland Barthes and Philippe Sollers.

Perhaps Segalen's greatest work is his *Stèles*, a book of poems cast in the highly original form of the Chinese memorial steles. Each poem takes the form of a rectangle framed in black, with an epigram in Chinese characters heading the text of the poem. The magnificent first edition of these poems, which Segalen presented to a select artistic élite in France, took the form of Chinese engravings: a heavy Korean paper folded accordeon-style, and tied with silk into two sheets of either camphor-wood or cardboard, covered with ancient Chinese silk.

The text of the poems develops a theme introduced by the epigrams, many of which are invented by Segalen. This technique recalls the ancient Chinese tradition of commenting and expanding on classical texts.

The stele symbolises permanence of form. The written words and ideograms are framed in the rectangular form of the book as the epigram is framed in the monumental steles of China. Inspired by Chinese civilisation, they have become an individual art form of universal significance.

Segalen's literary work in China is inspired largely by his expeditions into the interior. His remarkable archaeological discoveries are motivated, like his writing, by a passion to explore time and space within the physical diversity of the Chinese Empire.

Having studied archaeology under Chavannes, at a time when few Sinologists had worked in the field, Segalen was appointed head of an official French archaeological mission in 1914. Using historical texts such as the *Historical Records* of Ssu-ma Ch'ien, supplemented by local texts, commentaries and legends, Segalen identified many of the imperial tombs in the Wei valley, and re-discovered in particular the tomb of Shih Huang-ti, First Emperor of all China, which was thought to have been destroyed.

Segalen's imagination was fired by this superhuman figure who, by burning the books and burying alive any scholars who defied his orders, effaced the past and established himself as source of the Empire.

LEFT, above: A scene from Madame Butterfly, *the Puccini opera dealing with the love story of a Japanese girl and an American naval officer, with Mietta Sighele in the title role. (Photo by Bill Moseley, courtesy Australian Opera). Left: Cover of the magazine published in Paris in the twenties named after the heroine of* The Arabian Nights. *OPPOSITE, right: An iron column at Pao-Ning fu with a text of a sutra. (Photo Segalen courtesy Menzies Library, Australian National University.)*

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The Emperor of China becomes a dominant symbol in the work of Segalen, representing the height of civilisation, the mysterious and mythical power at the centre of the universe, the mediator of cosmic energy and power. This concept of the emperor, ruling the world from within the Imperial palaces in the centre of the Forbidden City, surrounded in turn by the Tartar City, also inspired Kafka's short story *The Great Wall of China.*

Segalen considered his great work on China to be his novel about the emperor, *Le Fils du Ciel.* This novel, which he was still working on up to the time of his death, has just been published in France. The Chinese characters of the title inspired Segalen's theme: the character 'heaven' seemed to him to represent a man with supple, outstretched limbs, who was crushed beneath the implacable stroke above him—a line which Segalen interpreted as the force of Confucian tradition in old China.

Les Immémoriaux had been written from a Tahitian point of view; in *Le Fils du Ciel* Segalen juxtaposes three different perspectives, each of them Chinese: the subjective poems of the Emperor, an ironic commentary by the official annalist appointed to record the intimate details of his reign, and official decrees of the Emperor or of the Empress-Dowager which give the key events of the reign.

This literary method of viewing a subject from various limited perspectives characterises the hesitant art of the twentieth century novel, in particular the work of Lawrence Durrell and William Faulkner. It contrasts with the omniscient view of the nineteenth century novelist, who manipulated plot and character from behind the scenes.

As did Nabokov in *Pale Fire,* Segalen adopts the form of poem and ironic commentary. However in this case the series of Chinese perspectives reinforces the exotic tone of the novel.

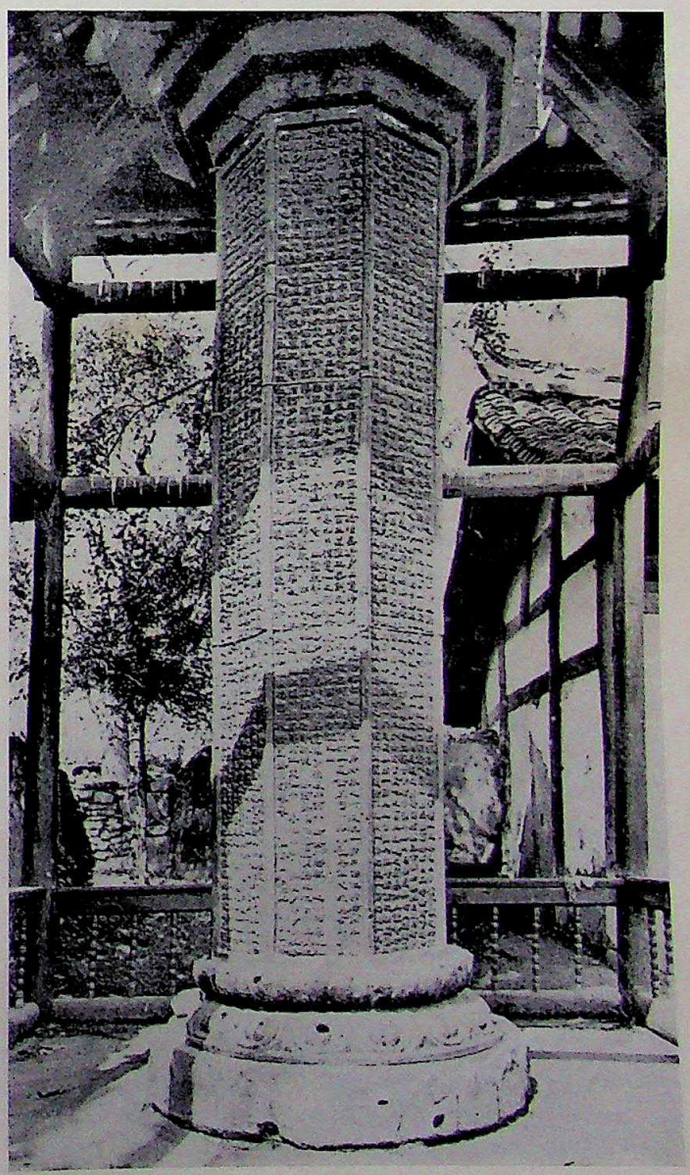
The official annalist, chosen for his qualities of virtue and filial piety, totally misinterprets the Emperor's poems. His comments, together with the Empress-Dowager's decrees, point to the Confucian ideal of kingship, and contrast with Kuang-hsü's desire to establish his own identity. This quest for individuality, which is at the core of Segalen's work, represents at once a Western ideal and the ancient Taoist philosophy of self-expression. Segalen, who found Confucianism repressive and moralistic, saw in Taoism the spirit he admired in ancient China, a fantastic view of the universe as perpetual play of illusion and paradox.

The novel describes the struggle for power between Kuang-hsü and the Empress-Dowager, Tzu-hsi, his aunt and adopted mother. This struggle is at once a conflict between rival philosophies of conformity and self-expression; between political and social forces of conservatism and modernisation; and above all a conflict between mother and son, born of Segalen's own revolt against his authoritarian mother and repressive family-life in traditional Brittany.

Kuang-hsü's efforts to modernise China are seen in the novel as an effort to impose his own individuality on the age. However the most ardent revolutionaries support their innovatory ideas by claiming they have precedents in Chinese tradition. This Confucian concept of conformity, which is diametrically opposed to Segalen's concept of exoticism, leads to the destruction of Kuang-hsü's sense of identity.

Tzu-hsi, supported by the entrenched forces of tradition, thwarts all the Emperor's efforts to modernise China. In the first year of his reign an unseasonable thunderstorm destroys the Temple of Heaven just as the Emperor approaches to make his first ritual sacrifice. Tzu-hsi interprets this natural disaster as a sign of heaven's centure of Kuang-hsü, much as the recent earthquakes in China were regarded by many as a portent of change in the leadership of China.

The shadow of the Dowager lurks behind the tapestries, more terrible in her absence through the power of suggestion and uncertainty. Even the beloved Pearl Concubine, reputedly thrown down a well for her spirited defence of Kuang-hsü, finally admits she has been a tool of Tzu-hsi. A solitary, tragic figure, Kuang-hsü finally takes refuge in madness, seeing himself as phoenix of the throne, reincarnation of the eternal spirit of the emperor.



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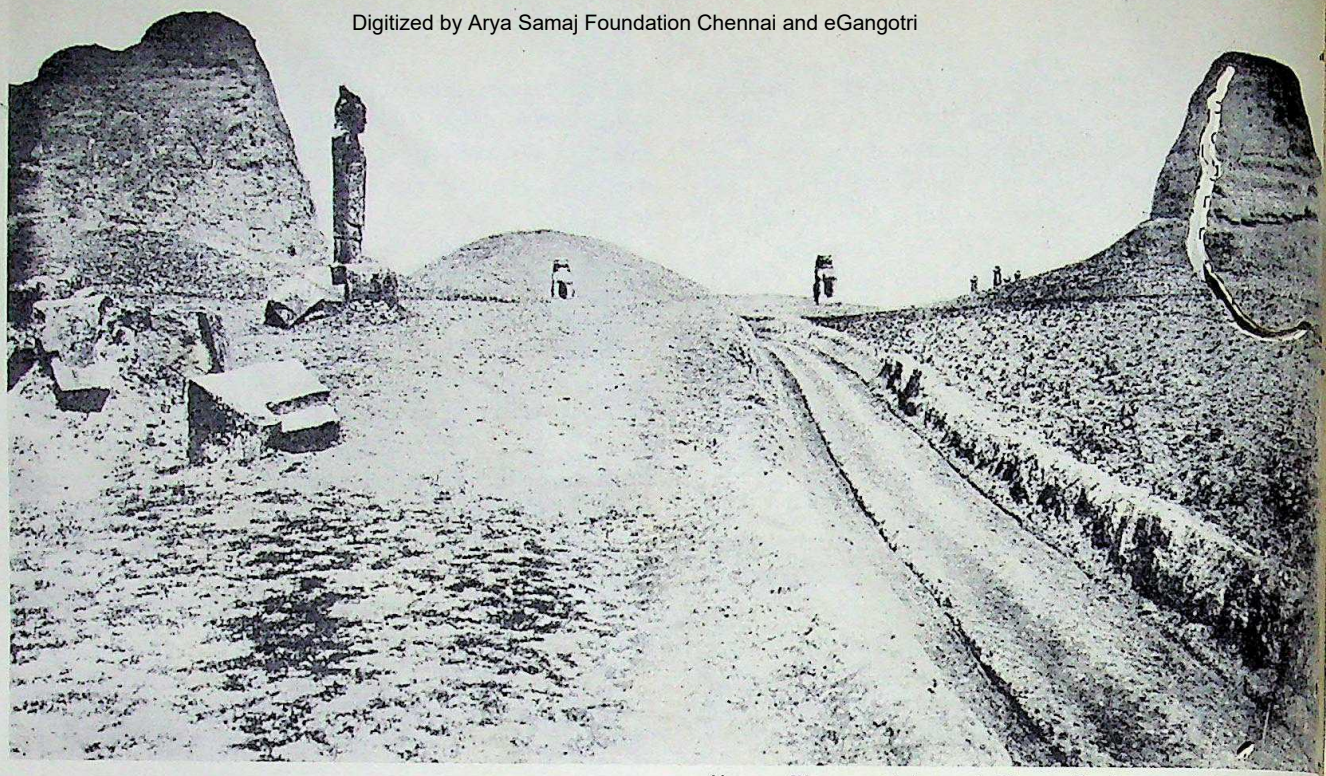
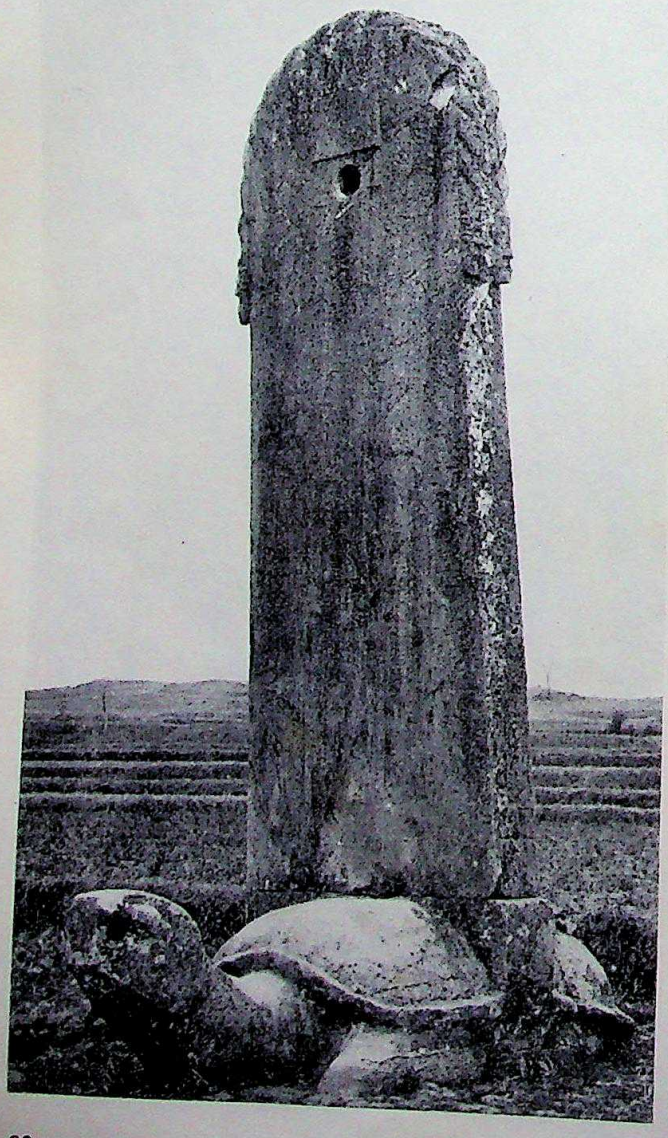


Above: The sepulchre of T'ang Kao'tsong (died 683 A.D.) looking towards the tumulus; left, a stele on the approach to the tomb of Siao Hong (died 527 A.D.)



Segalen's novel has broader implications than th nineteenth century European historical novel or characte study. It considers the effect of the imperial myth on th life of an individual. However the extraordinary story the decline of the Manchus has attracted great interes and as Segalen prophesied to Debussy, many mo realistic accounts have been published. Twentieth centu readers have become increasingly interested in stori of 'real life', which may perhaps broaden the horizons our shrinking world; and in this case historical tru seems more fantastic than fiction. The stories of thos close to the Imperial Court of Kuang-hsü were high successful; for example the memoirs of the 'princes der Ling, a Manchu noblewoman educated in the We who spent two years as lady-in-waiting at court. Der Ling memoirs* are interesting here in their more sympathe portrayal of the female characters, in particular th brilliant, extravagant Empress-Dowager whose love culture, tradition and sumptuous living no doubt enriche the tedious life at court. Paradoxically, this work by Manchu is less 'exotic' and Chinese in tone than that Segalen.

Another highly successful realistic account of this perio was the pseudo-historical work of two Englishmen Peking at the time, J. O. P. Bland and Sir Edmund Bac house. In their studies of the Imperial Court, *China unde the Empress-Dowager* (1910) and *The Annals and Memo of the Court of Peking* (1914), they claimed to use offic documents, some of which are now revealed as forgerie Bland, like the Australian G. E. Morrison, was a high

* *Two Years in the Forbidden City*, by Princess der Li London, 1912.

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respected journalist in Peking, whereas Backhouse, an English aristocrat and scholar of Chinese who taught at the University of Peking, was an enigmatic character who delighted in the interplay of fact and fiction. His extraordinary pornographic account in French, unpublished till now, of 'La Décadence Mandchoue' describes his adventures at court, and his love-affair with the Empress-Dowager. His so-called autobiography bears witness to the extravagance, intrigue and perversion which hastened the decline of the Manchu dynasty. Backhouse's fantastic stories of his exploits resemble those of the hero of Segalen's novel, *René Leys*.

René Leys, a novel published after Segalen's death, is a play on fact and fiction based on the author's life in Peking just before the fall of the Manchu dynasty. This ironical novel undermines Segalen's efforts to verify the documentation for his exotic novel, *Le Fils du Ciel*; it represents the antithesis of his exotic method.

A young Frenchman, Maurice Roy—the Belgian René Leys in the novel—who speaks several Chinese dialects fluently, offers to teach him the Pekinese dialect. He soon reveals an intimate knowledge of the Forbidden City, and is able to comment on the verisimilitude of Segalen's descriptions of court life. On intimate terms with the dissolute young Manchu nobles who delighted in play-acting, and revelled in the local tea-houses, he relates fantastic stories to Segalen of his secret entry into the Forbidden City, his friendship with the late Kuang-hsü and latterly with his brother the Regent, Prince Ch'un. Through his services to the court, he surpasses in glory heroes such as 'Chinese' Gordon, winning, as did Gordon, the coveted Yellow Riding Jacket, becoming, he claimed, head of the secret police, and lover of the widow of Kuang-hsü, the new Empress-Dowager, Lung-yu.

Segalen takes as the structure of this novel the plan of Peking, which Marco Polo had described in the twelfth century as having the form of a chess-board. In a series of subtle moves for control of the Empire, the imperial chessmen combat the shadowy forces of the revolutionaries led by their "king-figure", Yuan Shihk'ai. The game gives an air of unreality to an already fantastic subject. The figures in the game are playing roles in the game of chess or in the court drama. Unreal and insubstantial, they represent a vision of the world as illusory, where values are relative, and all things are subordinate to aesthetic beauty of form.

This autocritical novel, which satirises Segalen's attempts to get inside his subject, at once reveals the limitations of exoticism and broadens its boundaries. The narrator finds it impossible to distinguish between fact and fiction. He is confronted with the impossibility of knowing the truth, whether about Kuang-hsü and his court, about his fellow-European René Leys or ultimately about himself.

Exoticism as an exploration of unfathomable mystery is extended in this novel beyond the precincts of the Manchu court. *René Leys* foreshadows the movement in the modern novel away from a projection of external realism; it explores the fantasies and illusions of the human mind.

THE AUTHOR: *Mrs. Helen Reid, who has travelled widely in South-East Asia, is completing a doctoral thesis on Segalen in the Department of Romance Languages, Australian National University.*

JAZZ AND QUARTER TONES

Jack Lesmana interviewed

This interview done in a garden in Canberra where the only other sounds came from blackbirds and magpies and sparrows, represents a couple of the few quiet hours that Jack Lesmana, Indonesia's leading jazz-player, spent in a hectic but rewarding few weeks as Australia's guest. It was done off the cuff, and the relaxed atmosphere shows through the casual conversation.—Editor.

When was the lid lifted off jazz in Indonesia after President Sukarno had sort of forbidden it for so long and it had been kept going with the help of smuggled records brought in at the bottom of people's suitcases?

I played jazz for the first time in 1942. Of course I started with Dixieland music, but earlier I was a classical musician—a guitarist. I played with several bands, including a Navy band. Since 1959 I have lived in Jakarta, and once I played at the Palace for President Sukarno. He did not tell me he didn't like jazz, but he did tell me he didn't want improvisation. I met your famous jazz musician Don Burrows first in 1960 and did a tour with him. In 1966, we put a group together called *The Indonesian All Stars* with the best Indonesian musicians. We went to Germany and other countries in Europe, took part in the West Berlin Jazz Festival, the Dusseldorf Festival, and we had a lot of success. When we got back to Indonesia, we split up, and since 1970 I have done what I could to promote jazz. I started with rock and pop to attract the public, esepcially the younger musicians. As a money-spinner, it was a loser,

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but after seven years, although I am broke, I feel I have achieved something because we have a good public for jazz.

I give a jazz concert once every three months and, once a month, a jazz television show. I work in a private school, called the *Yayasan Seni Musik Indonesia,* where I am head of musical education; as well I have my own studio at home, where I have my own pupils for jazz. At the school we only teach classical music for guitar and piano in addition to organ and bass.

What's the jazz scene like in Indonesia these days? You teach because you have to earn a living, I suppose, like many people in other countries.

We have a lot of modern jazz and rock and some *avant-garde* jazz. There are not many jazz musicians, and that's why I am working on this project to have more jazz players.

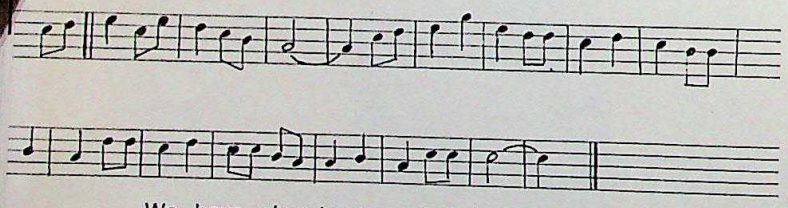
What about outside the capital, say, in Macassar, in Sulawesi, or over in North Sumatra — anything doing there?

Well, I haven't heard anything about jazz in Ujang Pandang, as Macassar is known these days, but in Java, Surabaya is quite heavy with jazz; Bandung, of course, and, as we said, Jakarta. And, in north Sumatra, Medan —of course it's not as big a scene there as in Bandung and Jakarta.

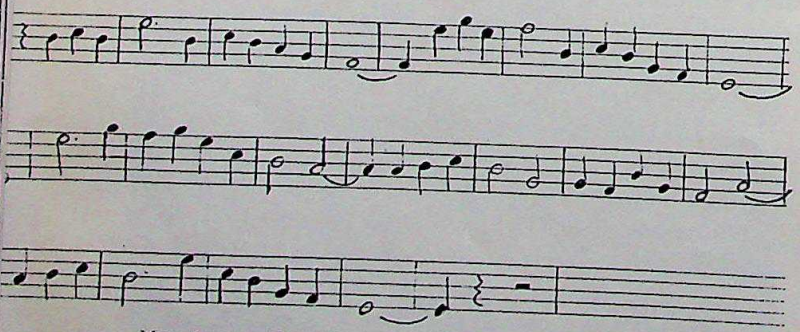
Do you think the Batak, the people from around Medan will be dancing to rock rhythms instead of the traditional ones?

No, I don't think they will do that, because we keep the traditional as traditional.

But you haven't: you've adapted a traditional Kalimantan melody — this one called Baris Barantai.



We have also incorporated Javanese modes and the pentatonic scale, so we keep some kind of identity by combining the gamelan, the Javanese sound, and modern sound, as in this example: *Gambang Suling* by *Narto Sabdo.*



You know, Don Burrows has a 'connection' program— last year with Brazil and this year with Indonesia. We had a long talk, and I am trying to work in with him.

What sort of thing is Don doing — taking Indonesian melodies and, literally, jazzing them up?

That's what he wants to do. Of course, we have some difficulties because of the quarter tones, because we are using gamelan instruments, but I will see what I can do in Indonesia by including all or some of the instruments the Indonesians are writing some of the music, and the Australians will be contributing their share. I was thinking of putting the rhythm of Balinese music in it and we can have the melody on Western instruments.

Don, of course, is very well known in Indonesia.

About four years ago he was last in Indonesia with guitarist George Golla and drummer Laurie Thompson we played together and had a workshop.

You find it easy to work in with a musician like Don who has been brought up in a completely different tradition — apart from jazz, that is?

Music is the same in any language; it doesn't matter where you come from, what you are . . . music is music, jazz is jazz . . .

Are you actually using gamelan instruments in any of your combos in Indonesia?

There are some young musicians, like Guru Sukarno the son of the former President, who does a lot with the gamelan, which sounds very good; it's a good start.

What instruments would he have, then?

He has a drum, electric piano, guitar, synthesisers and a group of *gamelan* players—a full gamelan. It sounds very, very good—amazing, although it's not jazz, but it's lovely. I'm not too fanatical, you know: it doesn't matter if it is jazz or classical or rock or pop as long as the music is good.

I wonder what his grandmother would say, because she was Balinese, wasn't she?

I don't know what she would have thought.

Grandmothers don't usually approve of improvisation in anything, do they?

No, but he has done well. There's another young fellow in Bandung, called Harry Roesli, who is doing the same thing, but his style is a bit different from Guru's. So, there are two people working hard on it. We tried before, in 1957, but we failed because we were too strict in our treatment of the *gamelan*; still, these days, with synthesisers, more things are possible and I'm very happy that these young kids are doing this—something's happening.

Since you're on the way to becoming a grandfather too, I suppose you find it's encouraging to see the youngsters working on?

I have a lot of pupils and so I have been able to encourage young musicians, not necessarily to play jazz, but to play good music.

You're making a difference between jazz and good music?

No. You can be a bad musician and so you play bad jazz.

Have you got a regular group?

No. I usually play with some of my pupils and some professionals, occasionally with all professionals — for

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instance at the first reunion in ten years of *The Indonesian All Stars.*

Have the Filipinos, who are anyway mainly for dancing, made much of an inroad into the Indonesian scene as they have in other parts of Asia?

Everywhere in South-East Asia you find Filipinos working. There are some good jazz musicians among them, but many of them copy American jazz. When I say 'copy' I mean you can do the American stuff and vary it according to the way you feel, but too many people copy off the records.

In Australia, we're not entirely innocent of that: in the early days of television they used to have a hit parade kind of program and had Australians miming recordings of American singers.

Who have you met in Australia, apart from Don Burrows?

Ed Gaston, who was with the group with Don Burrows; Judy Bailey, who is going to Indonesia in early June with a group. I've met Bill Motzing, who is head of the Jazz School at the Conservatorium in Sydney, and played with Terry Wilkinson—a very fine piano player—and have met a lot of other musicians—very good musicians.

How do you find the jazz scene as far as you've been able to judge in Australia?

In Sydney, there are so many musicians that you seem to hear jazz almost everywhere. I've met musicians in the Basement Musicians' Club and in Pymble, a suburb to the north of the city . . . That's one thing we don't have in Indonesia—jazz clubs. There's only one, in Surabaya, and they only have a program once a month. That's why I'm putting these jazz programs on once every three months in Jakarta. Also, of course, if people want to play jazz, they come back to my house and play in the studio there. By the way, I also listened to Brian Brown from Melbourne —a very good group.

Among the people you have met was Don Banks, our foremost electronics composer.

A very nice fellow: he knows all about jazz.

And his offsider, the very musicianly technician, at the Canberra School of Music, John Crocker, who was associated with a radio program which won the Prix Italia some years ago.

John Crocker showed me through the electronic set-up and explained how they teach electronic music there — very interesting.

But, apart from meeting the professionals, you've found time to listen to kids' bands in schools?

Yes, I was at Narrabundah College, a senior secondary school in Canberra, where I played for the students, one of whom was a very gifted guitarist. I had a good talk with him. At Narrabundah Primary School, I listened to

Right: Jack Lesmana and fellow-guitarist, George Golla, in Sydney, and, above, with a group in Jakarta (his son is on the right).

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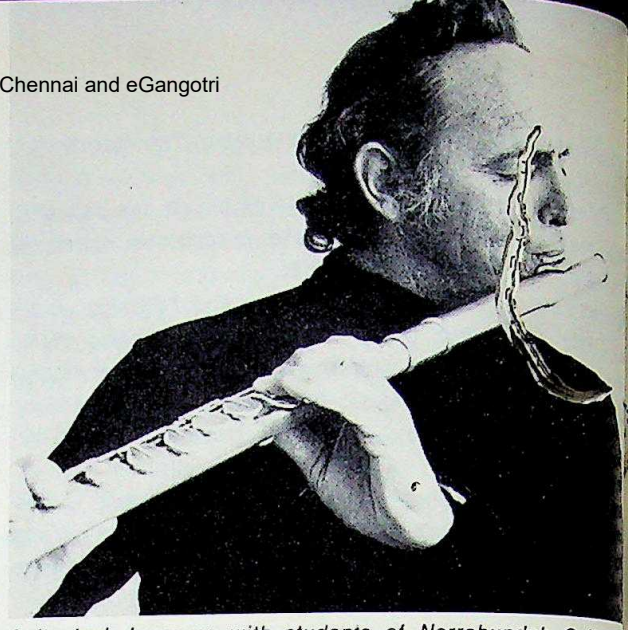

Left: Jack Lesmana with students of Narrabundah College, Canberra, and above, Don Burrows, who on many occasions has toured Asia, with his own quintet, justifiably well-known both at home and abroad because of Don Burrows' tours and his frequent performances on Radio Australia.

the school band—beautiful. For the kids it was wonderful, and it was something new for me. And it was a revelation to meet such youngsters.

Apart from traditional music in Indonesia, which makes up a very varied bundle, there's one invention that I don't think you'd like much more than I: kronchong. What is it?

Kronchong is now accepted as Indonesian music because if you say *'kronchong'*, people know it is from our part of the world. I'm not so keen about this *kronchong;* I don't even know where it comes from, and I'm not even sure it is Indonesian. It's hard, you know, talking about 'Indonesian music': we can talk about *gamelan,* about Javanese music, about Balinese, Sumatran—but I don't know about *Indonesian music.* A few musicians are mixing rock and *kronchong* together now.

At least that would liven it up a bit.

Yes, and it's popular now. I don't play much *kronchong:* I like to hear it, of course, but what I really like is *stamboul. Stamboul* is something that reminds me of the blues; you play the blues and they have a certain structure; *stamboul* has the same structure. You start with one four-bars, four two-bars, back to one, to five two-bars — its the same thing, with so many melodies. *Stamboul* is the same: you start with four. It is a kind of *kronchong,* it has the *kronchong* beat, but we call it *stamboul.*

Where did it originate—in Indonesia, too?

I think it's from Jakarta, I don't know where the name comes from, but it's good to listen to, mainly because the players and singer are improvising all the time.

What do you see as the future of jazz in Indonesia?

It's pretty secure, but I could do with some more backing: I'm broke because of it. And, I hope to come back to Australia; I've already seen Musica Viva, your musical organisation, which has sent many Australian groups of both classical and jazz musicians abroad. I would like to come back in a few months with a group and my son, but the trouble is the plane fare.

You talk about being alone in the jazz field, but you're not the only musician in the family?

No, there's my son. Like most fathers, I think he's outstanding. Part of the reason why he's so good at jazz already — he started at the age of ten — is because we have so much jazz in the house. Let's say, if you put Dizzy Gillespie's son in a community where there's no jazz, he will never become a good jazz musician; but you can take any child, from China or India or anwhere else and put him in a community where you have only jazz then he will have a better chance of becoming a jazz musician. My son spends a good deal of time with me at home as well as when I'm lecturing or making records so he has a feeling for jazz. He gave his first concert after only eight months studying the piano. He's a good musician for his age, writing his own songs and doing his own arrangements, and he's now studying music with Nick Mamahid, a brilliant musician, who studied classical music in Holland.

Your eldest son got away from it all and went to the United States, though?

Yes, he's studying business administration. My daughters will probably not turn into musicians: one has a very good ear and plays a little organ and piano; the other loves cooking and sings quite well. My wife, though, is a singer: she's my manager, my wife, my secretary. I don't know what I have to do tomorrow, but she keeps everything running: 'Jack, you have to do this, tomorrow you have this, tonight you have to do this'. I only play.

You've had a pretty full stay in Australia, then?

Yes, and a most interesting and rewarding one. I enjoyed the two weeks in Sydney, five days here in Canberra and the stay in Melbourne was exciting, too.

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'PRINTS AND PAINTERS'

Japanese Prints and Western Painters, by Frank Whitford; Studio Vista. ISBN 0 289 70752 8.

RIGHTLY, Frank Whitford has prefaced his book with a quotation from Louis Gonse, one of the earlier Europeans who really understood, and explained the art of the Japanese to his fellows: 'A drop of their blood has mixed with our blood and no power on earth can eliminate it.' Gonse's major work on Japanese art, produced in Paris in the 1880's, is still widely quoted today. With that book, and thanks to collections brought back at that time by informed Europeans, a solid foundation was being laid for an appreciation of the art-forms of the Japanese. A fusion followed, one of those that resembles two very different friends who get along well.

Earlier, soon after Commander Perry's ships entered Japanese waters in the middle of the nineteenth century accounts of travellers in Japan had fascinated Europeans and Americans alike. These followed the earlier reports from the Dutch and Portuguese Jesuits and travellers who had been allowed into the country until early in the sixteenth century, when Japan was closed to outside influence for over two hundred years.

The Japanese influence, says Whitford, was 'particularly important, and profound on painting . . .'From Manet to Art Nouveau, advanced painting in France and elsewhere developed in a way which can largely be explained in terms of the growing understanding of the Japanese aesthetic . . . it was the woodblocks which exerted the most powerful fascination.

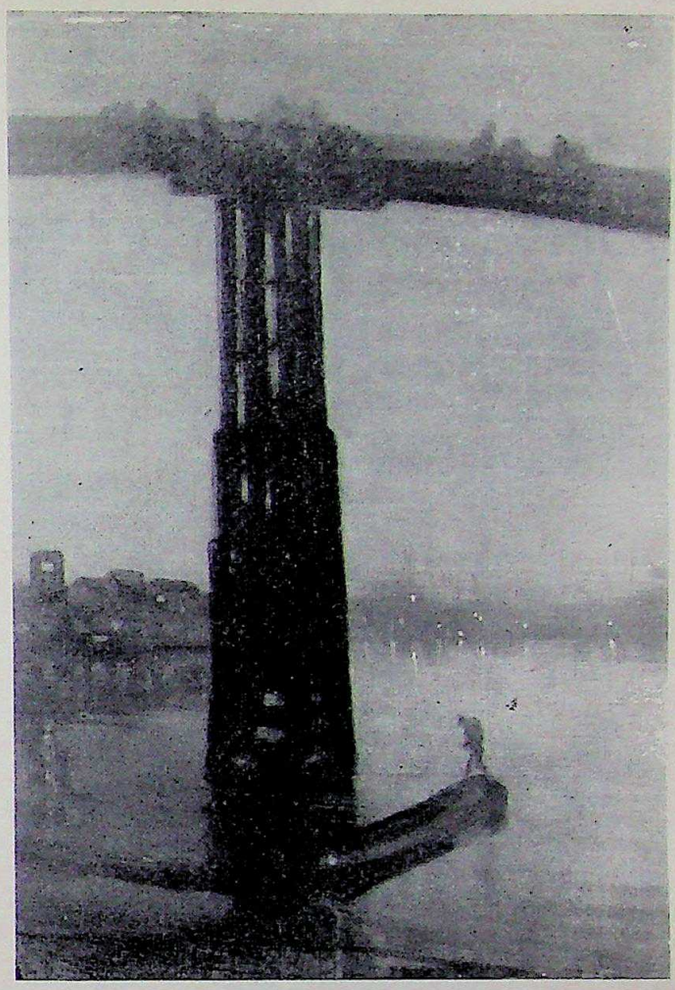
He goes on to say that, due to the strictly hierarchic feudal system, the merchant class was limited in opportunities of displaying its wealth, so that 'the kind of woodblock print admired by Western artists during the nineteenth century was an essential element of this subculture, created by and for the urban merchant class . . .' The *ukiyo* was the 'floating world, the transient world of the merchants. The *yoshiwara,* or brothel quarters of old Tokyo, scenes from *kabuki* plays, pictures of courtesans and lovers — especially in the nineteenth century progressed — the extraordinary perspective of the eagle's-eye view as it swoops towards the snow-covered earth in one of Hiroshige's *Hundred Views of Edo* (see page 35), or the mystic wonderment that comes out of Hokusai's plaque-like treatment of Fuji (a treatment nearly a century before its time).

Whistler, the American-born water colourist, was one of those who helped bring the enthusiasm to Britain and who took part in the fusion of the two styles, as can be seen from a comparison of his painting of Battersea Bridge and Hiroshige's Kyōbashi Bridge. Some Europeans, however, remained supercilious: the ultra-refined Goncourt brothers said with some condescension 'Japanese has beauties, no less than French art'.

For men of genius such as Toulouse-Lautrec and Bonnard, the Japanese woodblock print was a firm basis from which to work. From the woodcuts they learnt the use of space to highlight objects, they learnt to frame subjects as the Japanese masters did and the use of colour masses.

Japanese Prints and Western Painters. There are detailed analyses, richly illustrated, of the influences on the work of Manet, Seurat, Signac, Gauguin, van Gogh (who 'went to Arles [in the South of France] hoping to find Japan . . .'), Degas and Whistler of whose Battersea Bridge Whitford says '. . . It is not the details that are Japanese, but the very organisation of the composition . . .'

—DAVID GILCHRIST



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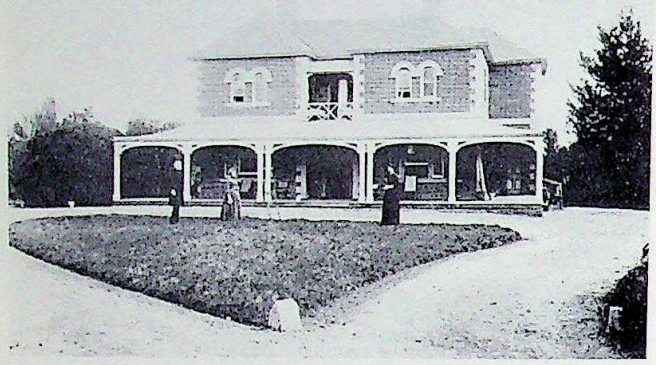
AS IT WAS



Canberra Collection, papers of the Historical Society... Lowden. ISBN 0 909706 46 8.

THERE are few capitals in the world in which even a few present inhabitants can remember their foundation, and in which a few more people can remember the first sitting of the national parliament in its new, semi-permanent home. One such is Canberra, which has a brief and not very colourful history but an active Historical Society determined to keep memories alive—even the fact that a Flower and Industrial Show held at Bungendore, a village then of about seven hundred population (in 1898) netted a profit of £21/10.

For the person who has known Canberra for thirty years or more (in the thirties it was a national 'village' with about eight thousand inhabitants) *Canberra Collection,* edited from papers delivered to the Historical Society and published by Lowden (ISBN 0 909706 46 8) is like looking through the family album and recognising buildings since disappeared (with that fine sense for preservation of historic buildings Australians generally show)—buildings such as Glebe House, where the rector of St John's Church once lived near now bustling Civic Centre, leaving empty unused ground surrounded by ancient trees. Still standing are the comfortable houses on the sheep properties, *Lanyon,* housing a collection of Nolan paintings, and *Cuppacumbalong,* now a privately-run arts centre. In the latter lived one of the more famous families of the Canberra district, the De Salis family, some of whom are still here. Their ancestors pioneered the district, having come to Australia from Eastern Switzerland via eighteenth century England. (One of the daughters married William Farrer, who did so much to improve the quality of Australian wheat, and who also lived in the district.)

There are some good stories from Charles Daley, who played an important part in Canberra's affairs almost from the city's inception until he retired in 1952. He tells some funny stories about and against the Administration—not the famous and probably apochryphal one about the miles of water pipes that were buried and the plans, and the pipes, lost for ever—but one about building a camp to house German nationals rounded up in China during the first world war. The German Government threatened that they would never exchange another prisoner if these nationals were to be brought here, and the camp was used for other purposes.

A book for the older resident, perhaps, but maybe the newer ones might be glad to know that Weston Park and Weston Creek are named after a forest working expert who was responsible for much of the early tree-planting here, or that the suburb of Weetangera was once a sheep-run.

PETER GILMORE

The illustrations show (from top to bottom) Glebe House, the Rectory built for Canberra's first church, the Church of St. John; with the Rector and his wife and daughter on the lawns in 1913; the then Prime Minister (Australia's first Labor Prime Minister) Mr. Andrew Fisher, calling for three cheers for Lady Denman, wife of the Governor-General, who had just named the city in 1913. On the left is the Minister for Home Affairs, Mr. King O'Malley; the De Salis homestead, Cuppacumbalong, about 1886. It is presently used as a privately-run arts centre. (Photographs courtesy National Library of Australia and Mr. W. A. F. De Salis).

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SPAN IN HISTORY

Professing History. W. K. Hancock. Sydney University Press, 1976, [illegible]73 pp. ISBN 0-424-00024-5.

THIS book, continuing as it does the story told in the author's *Country and Calling* back in 1954, carries a stage further the autobiographical writings of a pre-eminent Australian scholar, philosopher and humanist. The title, with its slight play on words, alludes with typical modesty to Sir Keith Hancock's distinguished record as a professor and teacher of history, unsurpassed among Australians and recognised the world over. But it gives no clue to his lively interest in a variety of situations and problems, material as well as intellectual, in Australia and elsewhere and not necessarily historical in origin, which he unfolds throughout the chapters of his book. Nor does it give a hint of the tenacious dedication with which he has set himself to try to put right what he has seen as the result of man's blindness or at least lack of foresight.

His first and seventh chapters are given over to his own conception of the true approach of the historian and of the craft of teaching history, with finally some very relevant reflections on the difficulties that university teachers of history are liable to run into in these days. After declaring himself to be 'at war with bias', he insists that the remedy for bias is not detachment, which he describes as 'a virtue when we begin to take stock of our discoveries' but 'a vice when we set out on our explorations'. A historian, in Hancock's terms, must seek to involve himself thoroughly in the thoughts, emotions and actions of the contending parties in any issue, past or present, before he can set himself to make a just and fair judgement of the fundamental truth. But in reaching his judgement—with emphasis on precision, by which Hancock sets great store—the historian must not shrink from taking sides on the crucial issues of intellectual and moral valuation, which is something different from bias.

On the teaching of history Hancock refuses to be dogmatic on the respective virtues of generalisation and specialisation. He canvasses the arguments on both sides; he looks back almost nostalgically on his own early training in Melbourne, largely generalised, under Ernest Scott and Harrison Moore; but he recognises that there has to be a place for the specialist. His main emphasis is on the need for proper technique, precision, and what he calls 'span', or perspective. He sees good reason for the present-day student demand for 'relevant history', provided that relevance is not equated with 'stop-press news and ephemeral fashions of sentiment and ideology'. He calls for more consultation between students and teachers, but deplores the current trend towards acceptance of student demands for an equal share with their teachers in deciding the salient issues of academic policy and university government.

One chapter is devoted to Hancock's monumental biography of Jan Smuts—to the circumstances of his writing it, to his defence against criticisms of Smuts, to his justification of the role of historian as biographer. Typically of the author, the Smuts biography was for him an exercise in total immersion in the life and times of one whom he saw as a man of great stature and a beloved figure who still lives for him as 'my particular person'.

It was his early studies in southern and also western Africa that led to his accepting from the British Colonial Office a new and different role, that of mediator in the constitutional dispute between the British Government and the people of Buganda, the monarchical province of the Protectorate of Uganda ruled by the exiled Kabaka Mutesa II. To the student of African politics in those pre-independence days of the early 1950s Hancock's conduct of his assignment, as he describes it at length, is fascinating for its pertinacity in bringing about, by methods that must often have seemed unorthodox to the Colonial Office bureaucracy, a meeting of minds between the Governor of Uganda and the regency council of Buganda. Unfortunately for the future of Buganda (and ultimately perhaps for Uganda itself), the British Government procrastinated until too late over giving effect to Hancock's proposal to bring back the Kabaka as a constitutional ruler.

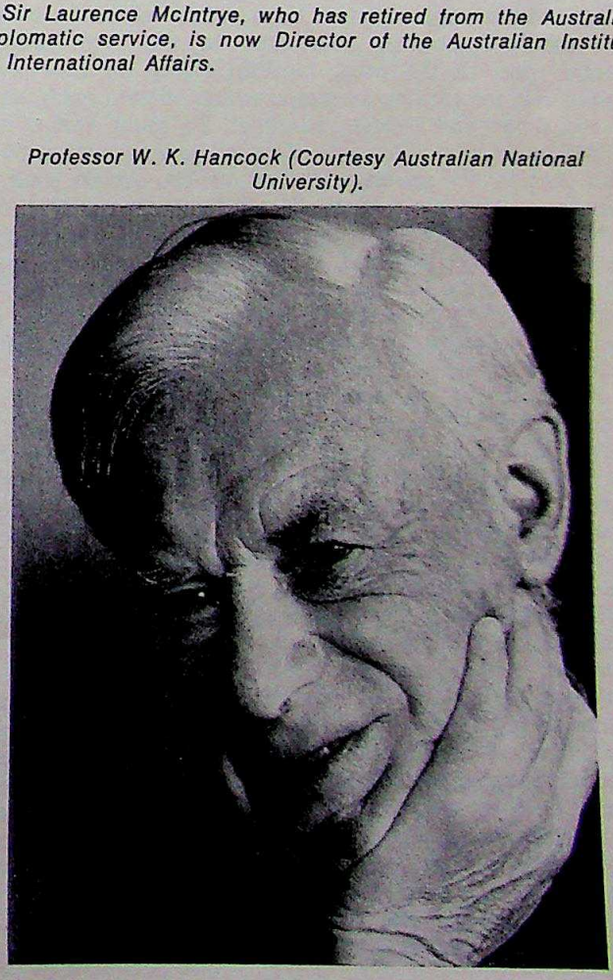
Some of Hancock's admirers will be more interested in the description of his zealous historical study of land-use and land-misuse in the Monaro upland region to the east and south of Canberra, a study calling for a knowledge in some detail of the native pasture plants and the soil chemistry of the region. The committed environmentalist again comes out in Hancock's spirited campaign against the desecration, as he saw it, of Black Mountain in Canberra by the erection on its summit of a lofty tower to serve as a television transmitter and a tourist attraction.

The last chapter is given over to sometimes sombre reflections on social and cultural changes in Australia since he wrote his *Australia* in 1930, on 'historical amnesia' as he sees it affecting Australian politicians and others who want to debase the word 'Commonwealth' on Australia's geopolitical situation in the world. Not all of this is very profound, but it is said with perception and balance, as befits one of Australia's most distinguished scholars and thinkers, possessed of deep affection and concern for his country and a wealth of human understanding.

LAURENCE McINTYRE

Sir Laurence McIntrye, who has retired from the Australian diplomatic service, is now Director of the Australian Institute of International Affairs.

Professor W. K. Hancock (Courtesy Australian National University).



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Ken Hall and a scene from one of his films of the thirties. Tall Timbers. *(Courtesy National Library of Australia).*

EARLY FEATURES

Directed by Ken G. Hall, by Ken G. Hall, Lansdowne Press, Sydney. ISBN 0 7018 0670 21.

BACK in the not-too-distant days before television ended the weekly Australian pilgrimage to the local picture theatre, one of the most familiar sights on the silver screen was the leaping kangaroo which opened each issue of the *Cinesound Review* newsreel. To most Australians of my generation the name Cinesound was synonymous with that highly specialised kind of film which tried to pack a week of news events into a tight, entertaining, ten minutes. It wasn't until the kangaroo, and the *Review* itself, finally disappeared in 1970 that Australians were becoming aware of Cinesound's former stature as the nation's leading producer of feature films. Television re-runs of the company's features were among the top rating programs on the ABC network at the time.

Ken Hall was the guiding spirit of Cinesound from its inception in 1931 until his departure in 1956. As well as being its administrative head, he produced and directed its feature films, the weekly newsreel and, in later years, many of its documentaries. This autobiography briefly covers his earlier years as a writer and film publicist; it dwells more on his career at Cinesound and, in particular, the eighteen feature films he made between 1931 and 1946. Unlike the other acknowledged giants of the Australian film industry, Raymond Longford and Charles Chauvel, whose careers must now be recounted and assessed by others, Hall has survived to have the opportunity to tell his own story in an era when the study of the industry's past is being treated more seriously and sympathetically, perhaps, than ever before. For this reason alone it is a valuable and unique document. Historians and critics have, and will continue to provide their own judgements of the Cinesound films; but from Hall's account of the studio's history the reader may make his own assessment of the ideas, hopes and necessities which sustained this remarkable organisation.

It is because Ken Hall functioned not only as a creati director but also as the administrator of what was, t Australian standards, a large film production organisatio and studio property that one may derive some insight in the practicalities and politics of film making in the thirtie and forties. For most directors it is their films — the finished creations, their works, their statements — whic are the measure of their success, and the means personal fulfilment as a creative artist. It is not hard t see that for Hall there was something more: the satisfa tion of building a stable and efficient organisation whic by being commercially viable, ensured continuity of wo for its actors and technicians and created the condition in which the skills necessary for feature film productio might be nurtured and developed. It is for this reaso that the story of Cinesound's lingering decline from th late forties onwards, after policy changes in the pare Greater Union Organisation brought an end to featu production, makes such sad reading. The innovation struggles and hopes of the thirties were not to be fulfille and the company fell back to making documentaries an weekly newsreels. Cinesound's record remains unique Australia's long film industry—the overall quality, quanti and diversity of its output are unmatched and the co sistent commercial success of its features, confirmin Hall's sound judgement as a showman, was almost u canny. Surviving for some forty years, its sheer longev in a volatile industry was no mean achievement.

It's an easy book to read, and liberally sprinkled w film stills; if there's an occasional preference for anecdo over cold historical data it is no doubt in the interests good storytelling, an approach which would come aut matically to a man who has written hundreds of fi scripts. There is much in its pages to evoke the nostalg of a bygone era—and those with fond memories of th films will enjoy it on this account alone—although this h not been the purpose for which the book was writte The final chapters, in which Hall surveys the prese resurgence of film production and suggests a futu structure for the industry, indicate a lively interest in t present rather than the past.

RAY EDMONDSO

Mr. Edmondson is Chief Film Officer at the National Libr of Australia.

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PRAYER

An ultimatum draws
our velvet hours in,
and from the tiny dial
an alien discipline
invades the corridors
of each drowsy cell.
The hands that built the dream
tremble and subside,
their images like toys
cast about this room;
we waken to a noise
other than our blood.

As juggernauts unload
we have already seen
behind the soundproofed walls
where marketeers convene
the handshake and the nod
that fastens on our wills;
seen the visionary
and formulaic scheme
of the nihilist heart —
its light, its vibrancy
fade and recreate
itself as diagram.

For child and meteorite
the basic rules apply,
nor will this prayer forestall
personal injury
and individual fate;
alone and culpable
our interstice of breath
cushions upon threat
where livid tensions glide
through the fissured earth
toward the lovers' bed,
toward the infant's cot.

Comfortless; and yet
our warmth, your candour could
eclipse the object loves,
induce a *we* from blood,
a short-lived *real* that
skilfully will weave
in tapestries of sense
against the dangerous
and disaffected thought
that dreaming innocence
when Time itself forgets
these lesions and our loss.

—ALAN GOULD

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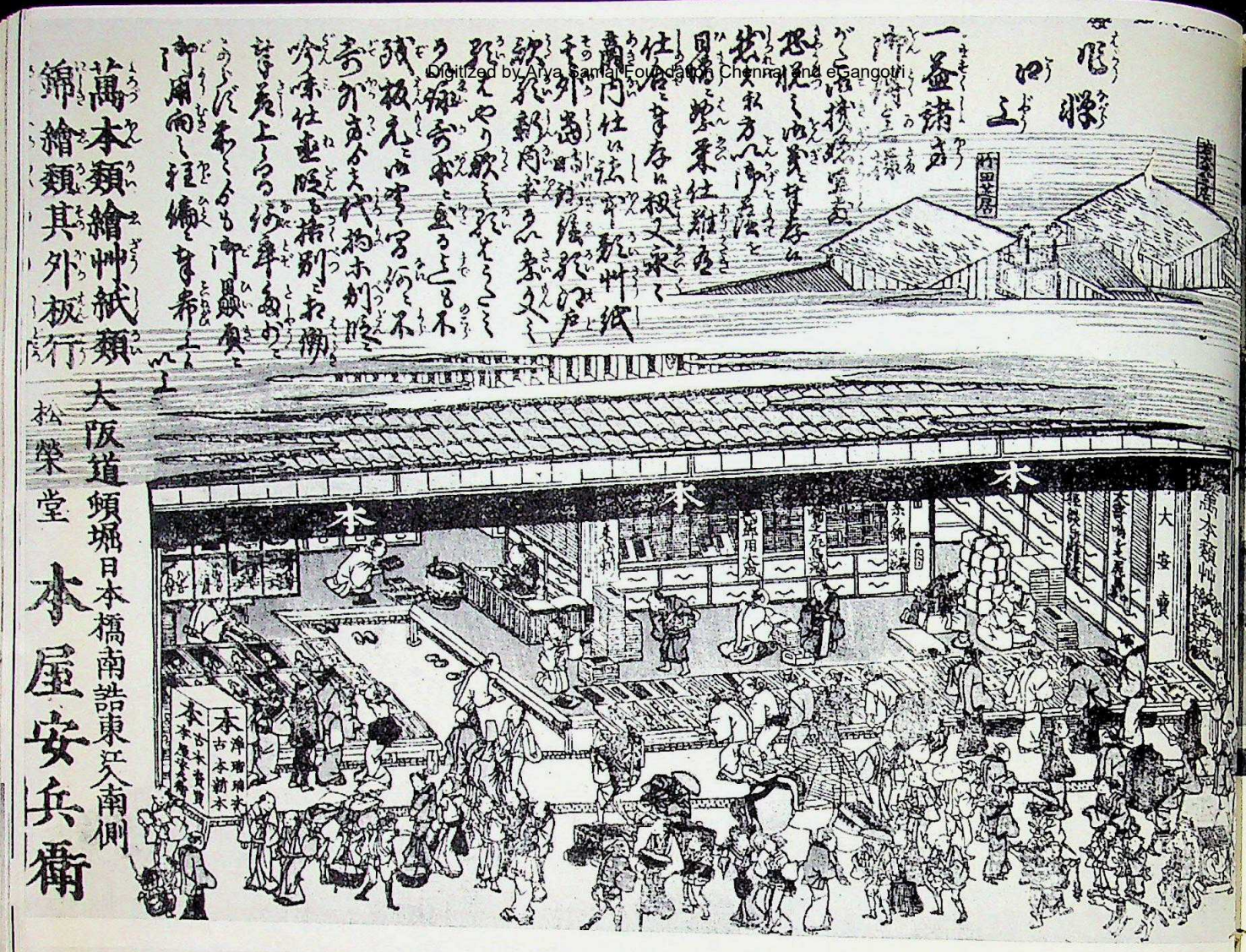
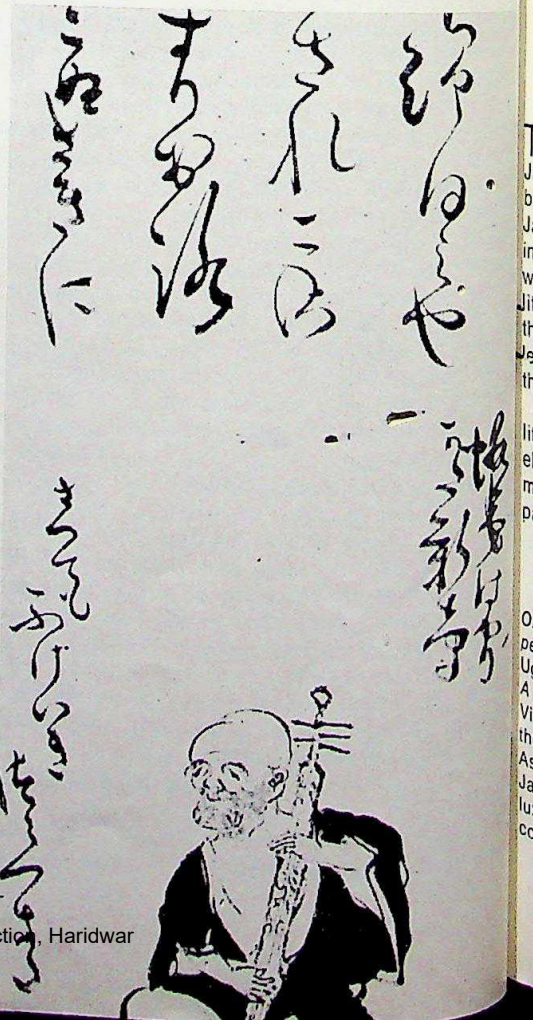


萬本類繪艸紙類大阪道頓堀日本橋南詰東江入南側
錦繪類其外板行
松榮堂 本屋安兵衛



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NOT ONLY FOR SHOPKEEPERS

Harold Bolitho

THE TOKUGAWA period (1600-1868) was pre-modern Japan's great age of cultural diffusion. So it should have been: it certainly had all the pre-conditions. In this period Japan had a stable government, a complex economy, and inter-regional trade on a grand scale. It had three of the world's largest cities, inhabited by people far more literate than any of their European contemporaries. For the first time in history ordinary Japanese had both the leisure and the cash to spend on luxuries like books and theatre tickets.

The problem was that traditional Japanese culture had little to offer them. The fourteenth century *Nō* plays, elegant, slow-moving, and deeply religious, made about as many concessions to popular taste as an Oberammergau passion play in Europe. *The Tale of Genji,* the greatest of Japanese novels, was still circulating in manuscript, just as it had for the previous five hundred years. A Tokugawa Japanese could read it as easily as we can read *The Parlement of Foules.* In poetry the situation was, if anything, worse. Seventeenth-century poets wanted desperately to write seventh-century verse.

This was good enough for courtiers and priests, who had time to spare, but obviously it was not likely to satisfy the tired businessmen of Edo (later renamed Tokyo) and Osaka. What they wanted was something altogether livelier and more readily understood. They got it, and to a large extent the history of Tokugawa literature is the story of how they got it.

In the theatre they got song and dance, passionate romances, and sword-waving, blood-and-thunder spectaculars, staged specially for them by a new breed of actors, managers, playwrights, puppeteers and singers. In books (commercial printing of which had started in 1609), publishers, authors, illustrators, book sellers and lending libraries competed, one eye on the censor, to give them racier reading. The emphasis in poetry, too, was to change radically. Once poets had tried to keep their skills to themselves, but they were soon to turn professional, racing energetically around country towns in an attempt to collect the largest number of paying students.

Clearly, there was a new spirit abroad in Japanese literature. In fact, it all sounds very like a Renaissance, European-style. Writers from Petrarch to Spenser had

OPPOSITE: A bookshop in Osaka during the Tokugawa period; a scene from a film based on the ghost stories of Ugetsu Monogatari, and their author, Ueda Akinari; ABOVE: A scene from the popular Kabuki play, Momiji-gari, *(Maple Viewing), based on a Nō drama with the same title, telling the story of a warrior who subdued a demon of Mt. Togakushi. As the author says 'For the first time in history ordinary Japanese had both the leisure and the cash to spend on luxuries like books and theatre tickets . . .' (Photographs courtesy Quality Films, Japan Information Service, the Embassy of Japan in Australia, and the author).*

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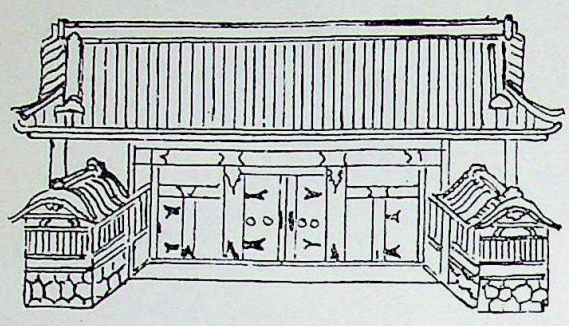
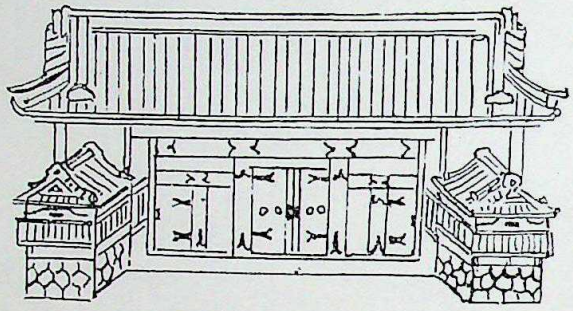


Fig. 1



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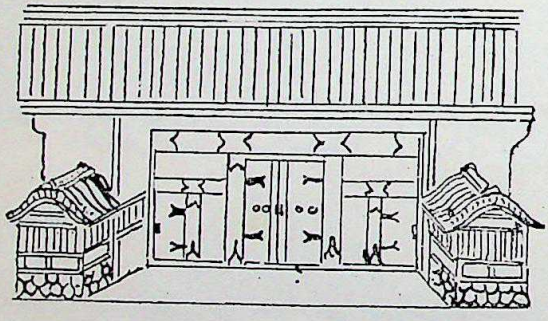

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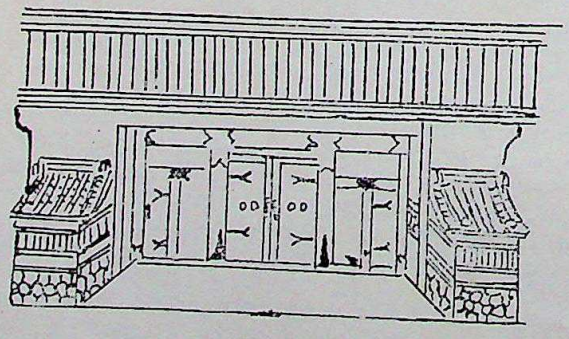

Fig. 4

Diagrams from the authoritative work A Short History of Japanese Architecture, *by the late Professor A. L. Sadler, the first and for many years Professor of Oriental Studies at the University of Sydney, showing the gates of mansions in Edo (present-day Tokyo), the capital of the Tokugawa Shōguns. (Reproduced by courtesy of Angus and Robertson Ltd., Sydney).*

led a movement in which religious topics were exchanged for secular ones, and Latin was abandoned in favour of the language of common speech. The writers of Tokugawa Japan, writing about everyday life as colloquially as they could, were really doing much the same thing.

There was one important difference, however. In Renaissance Europe, writers had worked in a context of cosmopolitanism and expanding intellectual horizons. This was just not feasible in Japan. Tokugawa Japan was as isolated from the world outside as any country could possibly have been. Japanese were not permitted, under penalty of death, to travel abroad, nor, with minimal exceptions, were Europeans allowed in Japan.

The Tokugawa period was therefore both a vital and curious stage in Japan's literary development. It was at the same time a period of cultural diffusion and a period of remorseless cultural constriction, both more open and more closed than ever before. Surely, one would think, an era of great intellectual tension, and therefore of great interest to the historian of literature. Now we have been given a chance to find out. In a recent book, bearing the evocative title *World Within Walls,** Donald Keene, perhaps the most authoritative of guides through the maze of Japanese literature, has tackled the literature of Japan's 'Renaissance in Isolation'.

Any reader who opens Professor Keene's book, and survives the first one hundred and forty-five pages of withering barrage devoted to *haikai,* the most attenuated Japanese verse forms), will be amply rewarded. To the handful of Tokugawa writers already known—Matsuo Basho the poet, Ihara Saikaku the novelist, Chikamatsu Monzaemon the dramatist—Keene adds some new names. Ueda Akinari, author of *Ugetsu Monogatari,* the collection of ghost stories which inspired Mizoguchi's well-known film, is acclaimed here as one of the most elegant of Tokugawa writers. Takizawa Bakin, the nineteenth-century novelist, is also restored to his proper place. In the theatre, we meet Tsuruya Namboku, author of the Gothic spine-chiller *Yotsuya Kaidan.* In poetry, Keene gives us not only the seventeen-syllable *haiku,* already fairly well-known, but also points us to the *waka,* its thirty-one syllable counterpart which produced its own masters, writing poems like this one:

> The wind blowing
> Through the pines has calmed
> And on the high branches
> Again the spring thrushes
> Are calling to each other.

Indeed the poetry of Tokugawa Japan, whether *haiku* or *waka,* whether serious or facetious, whether in colloquial Japanese or in Chinese, dominates the book. A disproportionate eleven out of a total of twenty-two chapters are devoted to it, while other things—the essay, for instance—are not mentioned. Yet Professor Keene obviously takes so much pleasure in it, and translates it so well, that only a curmudgeon would complain. Even when the same poem appears twice, each time with a different translation, one is not inclined to cavil. Whether he translates it as (on p. 85):

> Mallow flower
> By the side of the road —
> Devoured by my horse,

or as (on p. 530)

> Rose of Sharon
> By the side of the road —
> Eaten by my horse,

the effect is still pleasing.

---

* Secker and Warburg, 1976. ISBN 436 23266 9.

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many of those that followed. 'Spring Frost' (1919) is tricksy and vulgar, with streams of light slashed across the canvas in the manner of stage scenery. The success of 'The Morning Light' depended upon several earlier and diverse influences on Grüner: the painter Max Meldrum's tonal realism; a visit to Melbourne to study Corot's 'The Bent Tree'; Julian Ashton's insistence on *plein air,* which Grüner once took to the extreme of standing in the middle of a creek to paint; plus something of Hilder's evaporating delicacies. Holding these disparate elements down on the canvas were *impasto* brush strokes which made key parts of Grüner's pictures stand at a distance from the picture plane, so that he had little difficulty in creating the illusion of light peeking out from behind solid objects.

The hitherto conflicting elements in Grüner's approach to painting were resolved, temporarily, by his growing distress at the carnage of the Great European War. All through the war he contemplated enlisting in the medical corps since he 'could not possibly go with any other body . . . [because] all of my ideas are constructive and not destructive'. 'The war is absolutely getting me down', he told another painter, Hans Heysen, 'and I cannot hope for any peace of mind until I am trying to do something to repair the damage done the unfortunate victims of the ghastly tragedy'. Despite his indifferent health and frantic efforts by friends to stop his enlisting, Grüner entered Liverpool camp on 4 June 1918.

For a time, the war provided Grüner with something to say. He chose to paint the dawn because, as Jack Lindsay put it, he 'wanted to paint the sudden permeation of the dark earth with a universal lucidity'. Grüner was one of the first to seek that light at the end of what proved to be an endless tunnel of darkness for those who placed their hopes in a continuation of liberal progress. The promise of 'The Morning Light' would have undoubtedly appealed to a public whose hearts were being buried alive in the trenches of Pozières.

Discharged from the army on New Year's Eve 1918, Grüner went to live and work 'under the verander (sic) of an old school house closed in with chaff bags . . . So I am feeling very happy much more so that than I have felt for a long time and there is no excuse for me if I cannot turn out some interesting stuff'. The work he did when the weight of war was first lifted was often intrinsically strong enough in subject and small enough in execution to let him get away with reworking other people's achievements. The test came late in 1919 when he received from the New South Wales Art Gallery a commission of three hundred pounds to paint a typical landscape. Grüner produced the totally cliched 'Valley of the Tweed' (1921) which is notable mainly for its mish-mash of every stylistic device from Corot to *art nouveau.* This overblown work confirmed that Grüner did not know what to do with all the techniques he was so carefully mastering. Instead of providing a continuing prospect of hope for humanity, his work had rapidly declined into a rustic sentimentality.

Grüner was aware that he needed a new direction for his work. He found the 1921 Society of Artists' show

A Glade, *etching, undated. (Courtesy National Gallery of Australia).*

stimulating because of the controversy aroused by the presence of a few Modernist works by Roy de Maistre and Roland Wakelin. So, in 1923, Grüner went to Europe as a non-paying passenger on one of the art collector Howard Hinton's cargo ships. Without wanting to, Grüner found himself in charge of the Society of Artists' London Exhibition. The show was a success, but the eminent Sir William Orpen told Grüner how derivative his 'Valley of the Tweed' was, without realising that it was Grüner's work. Grüner was greatly upset, but determined to find a way through to more individual painting. Unfortunately, he paid attention to Orpen's positive advice which consisted of a set of rules designed to obtain the broken-down surface effects of Modernism: 'Paint can't be too thin'; 'No picture should be bigger than two by three feet'; "Style is more important than subject'; 'Paint should have a dry, pastel-like surface'.

Grüner stayed in Europe for two more years, travelling to Italy and working in Paris. The Post-Impressionist Cézanne's impact was felt in a series of oils he painted around St. Tropez; a touch of these architectonic planes survived in 'The Footbridge, Parramatta Park' (1926). Grüner was also impressed by Gauguin, much to the horror of the influential Australian artist Norman Lindsay (Jack Lindsay's father): 'Among the various shocks that I have experienced during some 47,000 years, I count the discovery that Grüner had expressed an appreciation for this frightful savage to be one of the severest.'

When Grüner returned to Australia his interest in Modernism led him to join a so-called Contemporary Group Exhibition in Sydney in 1926, and he clearly wanted to explore the possibilities of presenting a new vision of the Australian landscape. Grüner's failure to move very far towards this goal was the result of a number of interconnected and often personal reasons.

When Norman Lindsay decided to win Grüner back to the path of artistic sanity, his strategem was not to attack Modernism but to continue his extravagant praise for these traditional elements which remained in Grüner's new work. Grüner could not withstand the pressure of being

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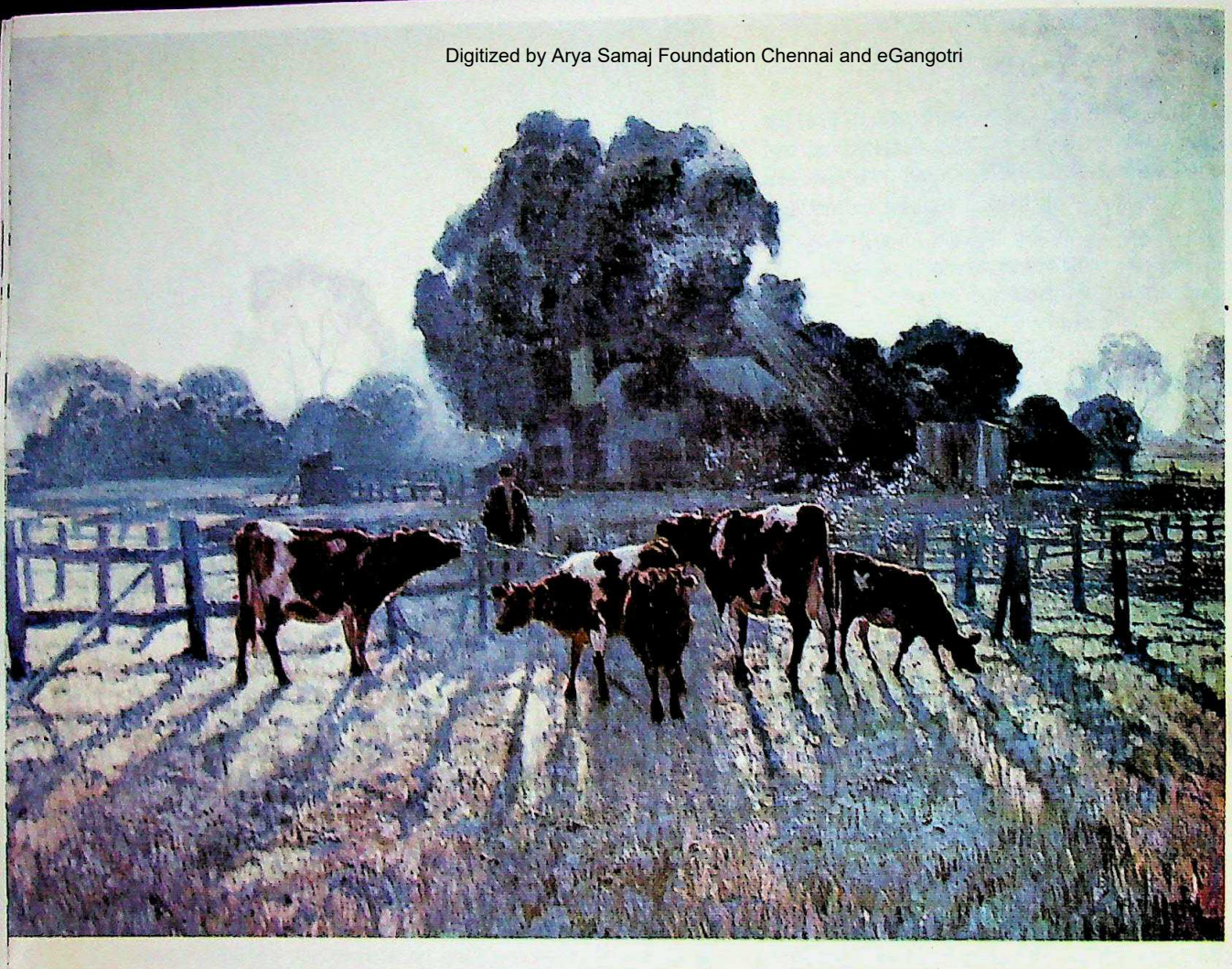

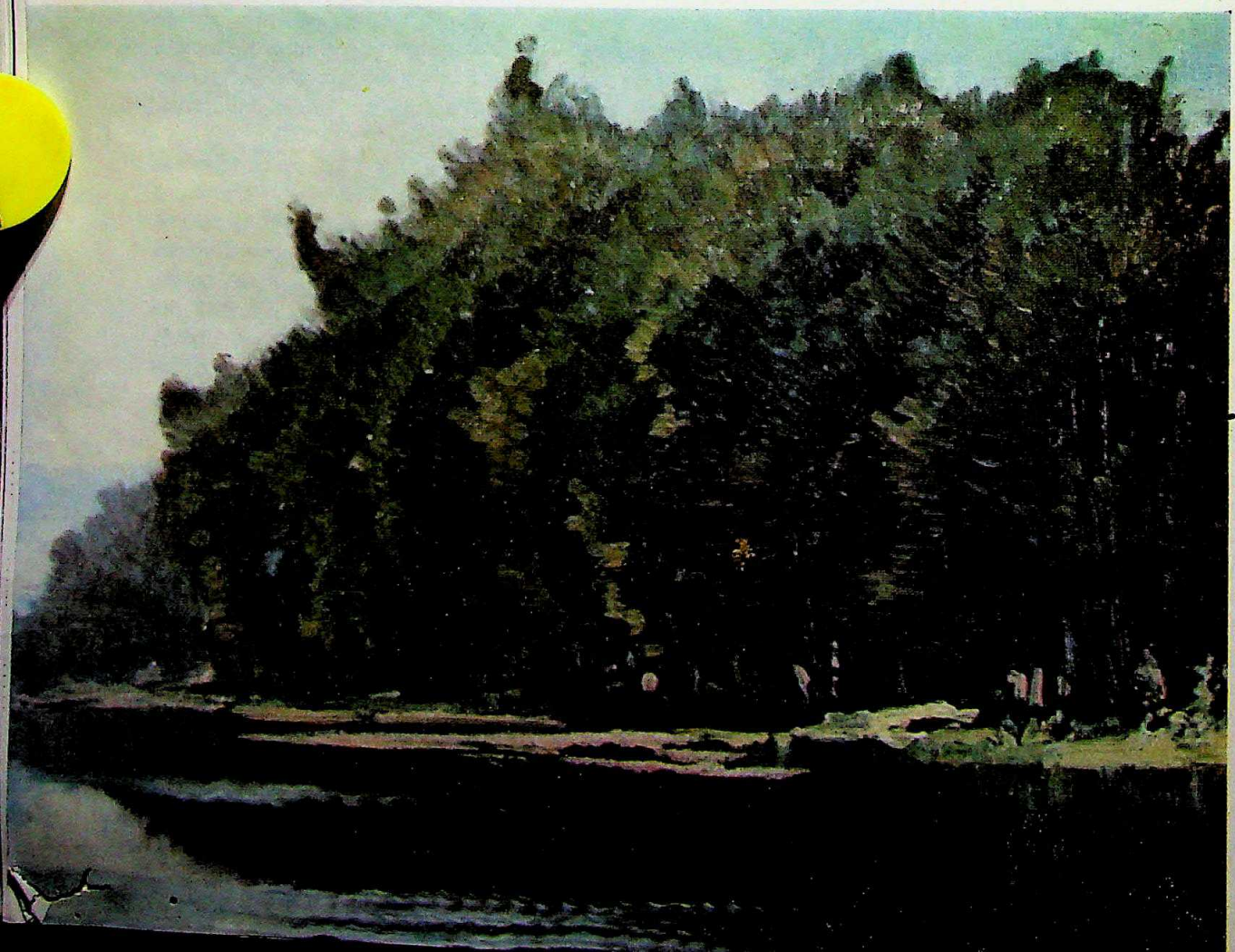

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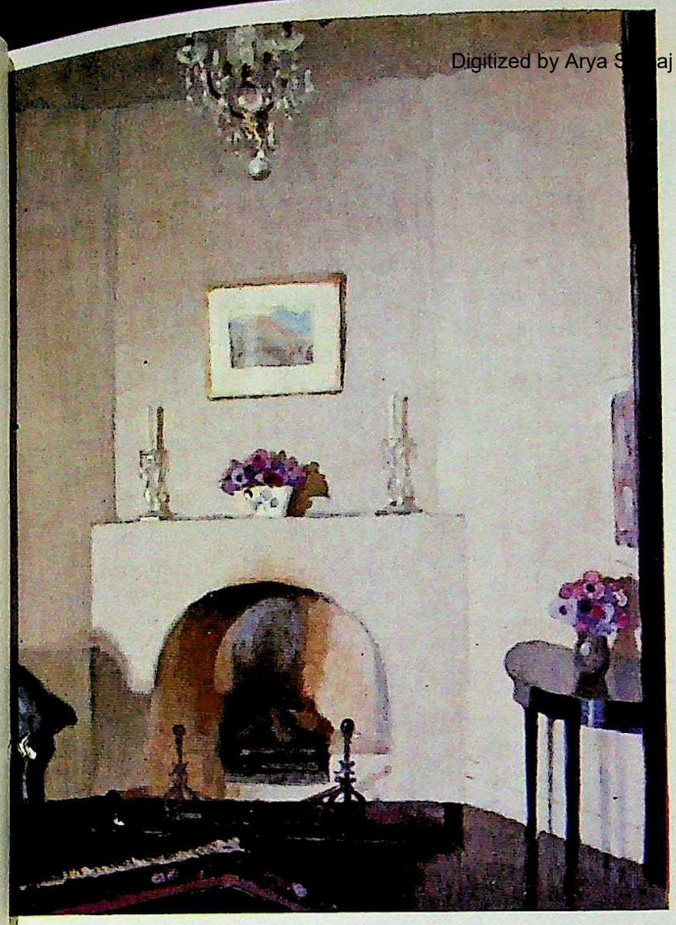

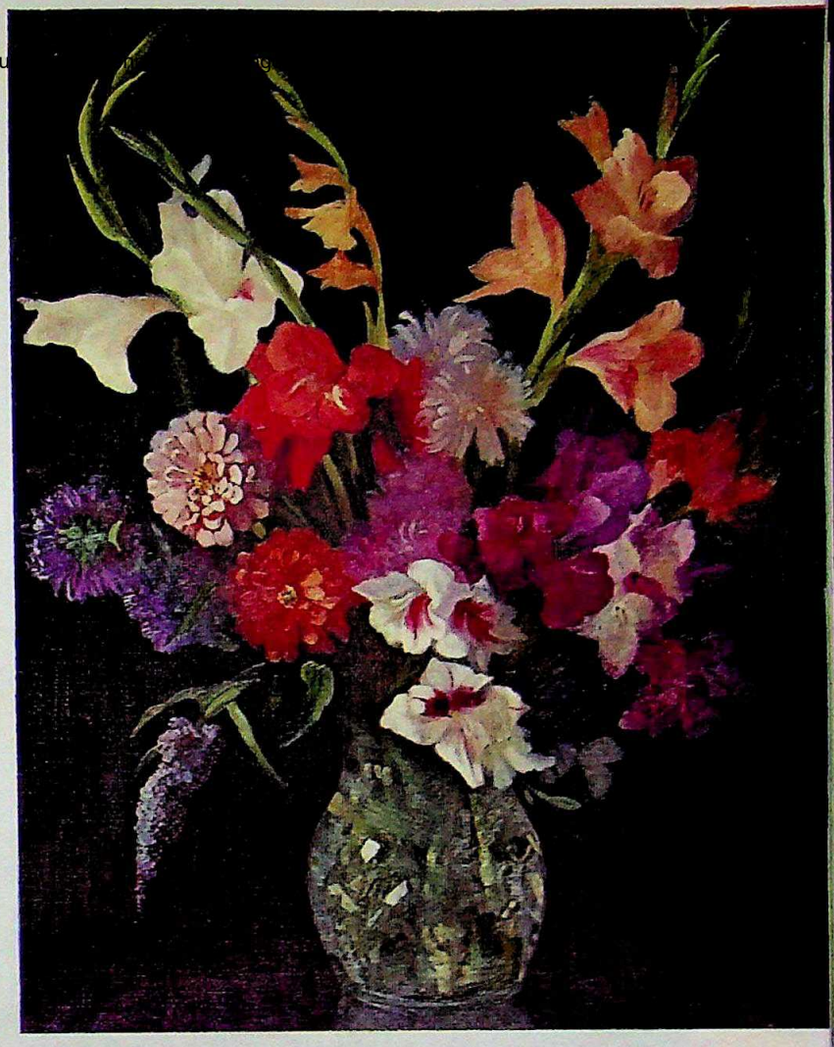

told that he was the greatest landscape painter in the world. Lindsay's views were reinforced by the art-buying public, who wanted their Grüners to look like Grüners and not like grotesque Gauguins. And Grüner depended on this public more than most painters, since he was one of the few Australians to earn their living from the sale of their pictures. And here his homosexuality intervened. Unlike some full-time writers, such as Vance Palmer and Louis Esson, Grüner did not have a wife who could support him through his experimental phases. He needed a substantial income to maintain the comfort of his Bondi home. Although Grüner cheerfully roughed it in the bush for months at a time, he could not do without the periods in town where he reverted to being a dapper draper's assistant, with expensive shirts and elegant living.

Thus the work he did after his European tour showed few traces of either the studies he had made overseas or the intellectual and personal turmoil he experienced. If you know that Modernist hints are supposed to be present, it is possible to find them in Grüner's later work. 'Sea-piece' winks at Henri Matisse when a faded lolly-pink house is laid on top of a baby-blue sea and sky; the corner of a patterned rug snuggles its way into the bottom of a jaded *art deco* 'Interior' (1928) where such perspective as there is is achieved by the organisation of blue and pink furnishings against white walls. 'Still life—Roses' (1925) sneaks a touch of the exotic into a proven best-selling subject through similar devices.

This pretty patterning proved to be no more than an interlude in his development. Even before Grüner's European experience, the laboured precision in the work of

Opposite page: Spring Frost, *1919, and the river scene called* Landscape. *(Both by courtesy of the Art Gallery of New South Wales and the Perpetual Trustee Co. Ltd.). This page, above,* Flower Piece, *oils. (Courtesy National Gallery of Australia); above, left,* Interior, *1928, oil on board; below,* Seascape, *1923, oil on canvas and wood (both by courtesy of the private collectors, photographed by James Fitzpatrick, AIS).*

(The two etchings and the drypoint are reproduced in black and white by special permission of the National Gallery of Australia from originals in sepia).

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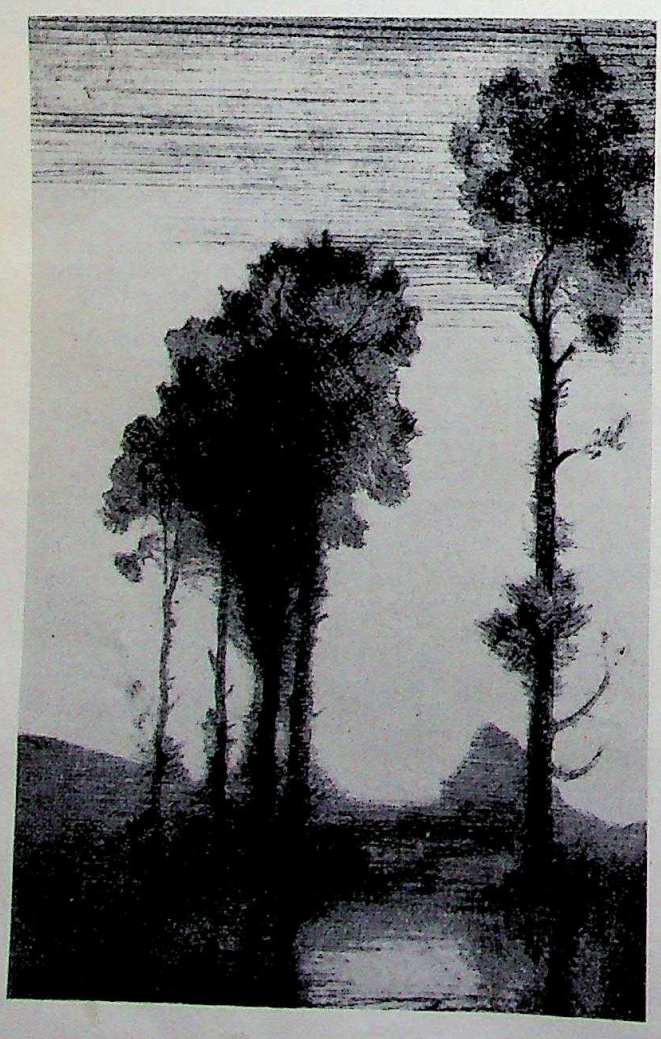
The Cascade, *etching, and* Twilight, *drypoint, (Courtesy National Gallery of Australia).*



George Lambert had helped to point Grüner away fr the shimmering softness of his own paintings and toward a stronger sense of construction. From Cézanne, Grün recognised the importance of the weight and mass natural objects. His post-1925 landscapes were flatter a dryer, like aerial photography, as he pursued what called 'the anatomy of the earth'. Norman Lindsay realis that Grüner sought a constructive principle as clou passed over 'the peculiar formation of our ridges a gullies, which intersect in an endless repetition of t same pattern'.

Grüner's changed approach to nature was expressed two of his rare statements of self-explanation:

> I go round looking and observing, interested but n moved. Then suddenly, off my guard, I see somethin See it only for the flash of a second. It's there, a there it isn't. Only a pleasant landscape arrangement left, the sort of thing any well-taught art-student wou select and paint. And yet I know that what I want there, I saw it in that flash. So I stay and study t scene, looking and looking at it, analysing it from angles, painting too, experimenting, till at last I mana to grasp analytically what I saw in that first flash, a then I struggle to get it down.

After working in Europe, he believed that painters he 'a much more difficult problem here than abroad' becaus 'Our trees are comparatively thinner in their outline a the vast spaces emphasize their singular forms'.

The discovery of the forms of the Australian enviro ment occupied other artists, such as Margaret Preston a Kenneth Macqueen who, in their different ways, were l more ruthless in cutting away inessentials than Grün ever was. Grüner's contribution was to act as a bridg leading the art public away from the lights of Heidelbe into an uneasy acceptance of low-keyed formal attribut Works such as 'On the Murrumbidgee' (1929) took the market almost further than it was prepared to go a Grüner retreated until, by 1936, he was praised for 'tender delineation of form, neither thrust violently into third dimension, nor yet allowed to remain over-soft, taking, as usual with Grüner, the middle way'.

'The Murrumbidgee at Weetangra' (1937), which w both the Wynne Prize and the Society of Artists' Med epitomised Grüner's 'tender moderation', by heavily ov laying his formalism with a poetic realism. The somb mood of these later works was as closely in tune with public's feelings as his dawn lights had been during first world war. Faced by the Depression, by Fascism a by the likelihood of a new world war, fewer Australia could rally to the golden hues of the ageing painter Arthur Streeton. Even that great champion of the pur ing landscape, James S. MacDonald, found a place Grüner's reflective and violaceous depiction of his o feelings through 'the latent in our landscape'. To a limi extent, Grüner was a precursor of the more subject visions of the bush made by Sidney Nolan, Arthur Bo and others in the 1940s.

Remembering Grüner's agonised response to the 19 18 war, it is impossible to believe that he remained moved by the world crisis of the 1930s. These pu

concerns, again and After twice no more a October 19 clared wa blocked or

Editor's no Elioth Grün entire field until recen Director of University typical lan wars just a But his tal he certainl for fine ton fastidious character. be taken a the open *Painting 17*

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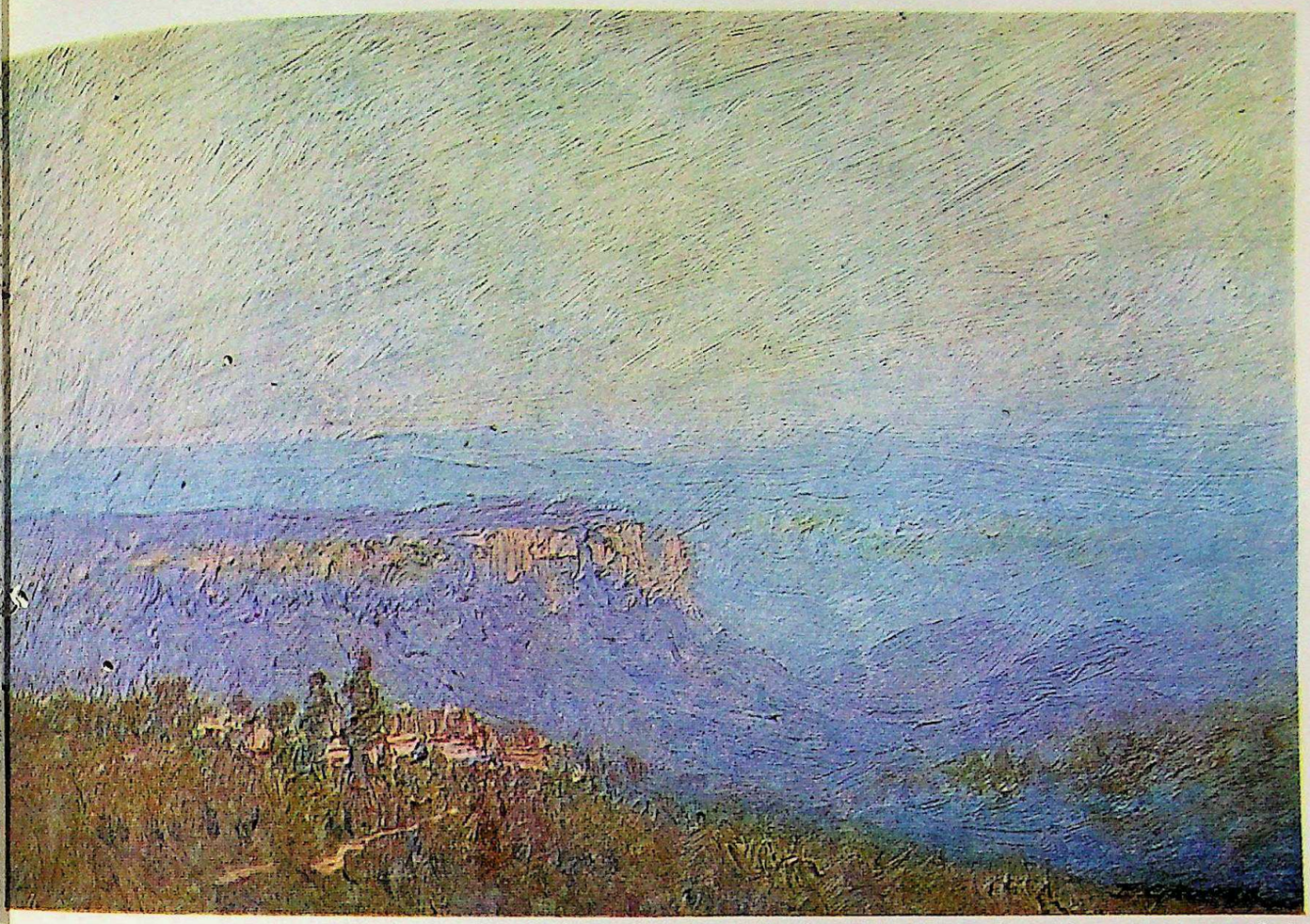

ABOVE: In the Blue Mountains, *oil on board (courtesy private collector, photographed by James Fitzpatrick), BELOW:* On the Murrumbidgee, *1929, oil on canvas (courtesy of the Art Gallery of New South Wales and Perpetual Trustee Co. Ltd.).*

concerns, added to his private torments, drove him again and again to the edge of alcoholic oblivion. After twice saving his life, a doctor friend could do no more and Grüner drank himself to death on 17 October 1939. Six weeks earlier, England had declared war on Germany. The morning light was blocked once more.

Editor's note: A further comment on the work of Elioth Grüner is from the authoritative work on the entire field of Australian painting by Bernard Smith, until recently Professor of Contemporary Art and Director of the Power Institute of Fine Arts at the University of Sydney. He says the artist was 'the typical landscape painter of the period between the wars just as Lambert was the typical portrait painter. But his talent was smaller than Lambert's. Although he certainly possessed a keen and discriminating eye for fine tonal gradations, there is a neat and sweetly fastidious refinement about his work that lacks character. Many of his landscapes might not unfairly be taken as Meldrum (a contemporary portraitist) in the open air with milk and sugar'. From *Australian Painting 1788-1970, Oxford University Press, 1962/67.*

** Although Grüner is now known only as Elioth, he was christened Elliott and exhibited under this name as late as 1920. The first use of Elioth in a Society of Artists Catalogue was in 1914.*

The author of the article is Senior Lecturer, General Studies, Canberra School of Art and has just finished the manuscript of a new book, to be published shortly, dealing with the emergence of modernist painting in Australia, The Black Swan of Trespass.

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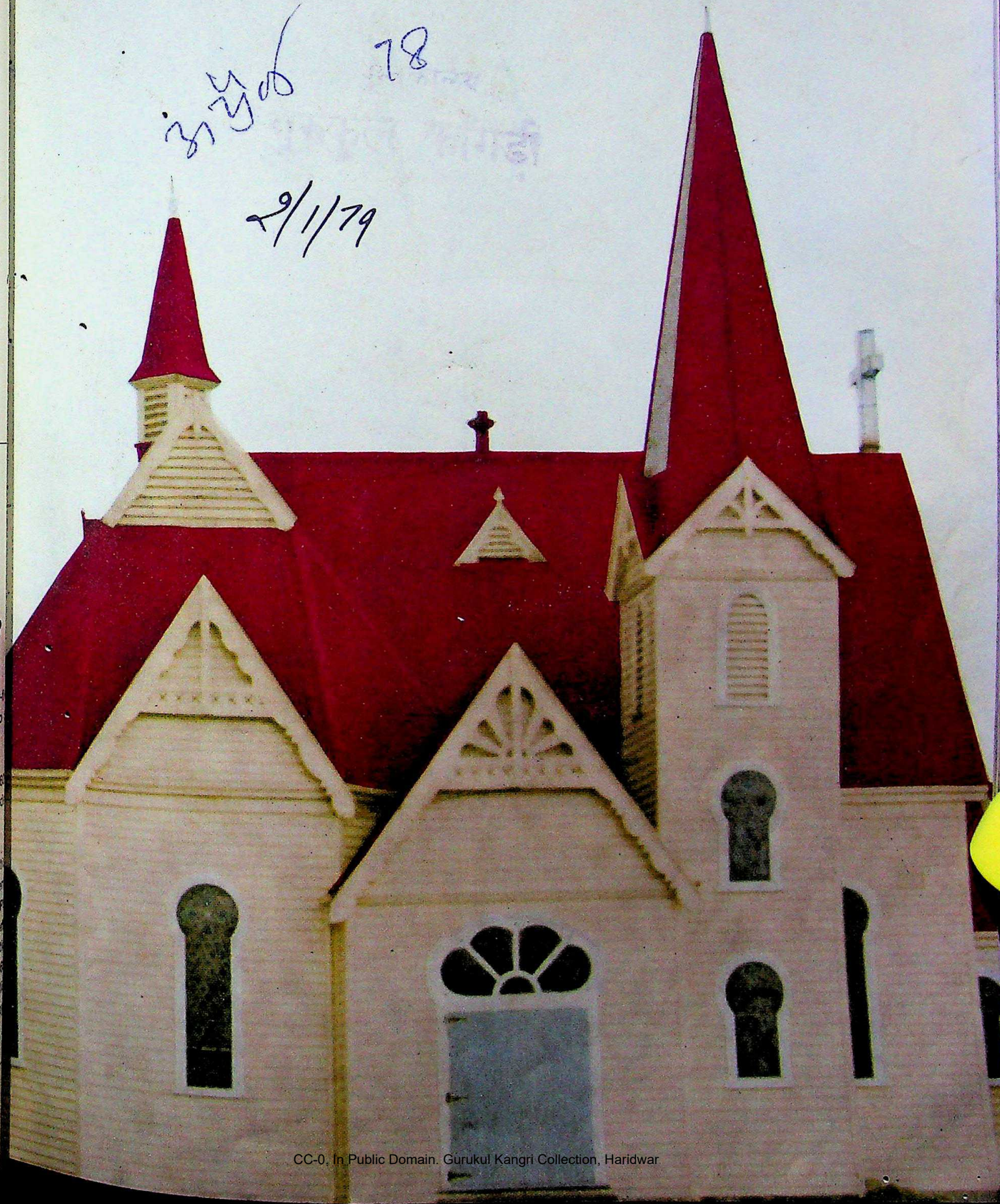

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(Alex Ritch

A view of Lord Howe Island. The new turtle and bird finds are from the rocks at the far end of the nearest beach.

AN ISLAND SANCTUARY

Alex Ritchi

The turtle lives 'twixt plated decks
Which practically conceal its sex,
I think it clever of the turtle,
In such a fix to be so fertile.

—Ogden Nash.

THE search for fossilised remains of long-extinct plants or animals preserved in the rocks of the earth's crust often leads palaeontologists, scientists who study fossils, into isolated situations where living and working conditions are not always pleasant. These may range from the arid regions of central Australia to the icy wastes of Antarctica, and from the depths of dusty mines to quarries being used as garbage dumps. Just occasionally, however, a field project comes along where the fossil remains being sought are located in an area of considerable beauty and where the living conditions cannot be described as arduous.

Such an opportunity which presented itself recently to the writer fell into the latter category and led, u expectedly, to the recovery of some extremely importa fossil specimens for The Australian Museum. The situatio was a beautiful coral island off the east coast of Australi and the quarry being sought was a strange, long-extinc horned turtle which once inhabited it.

Lord Howe Island, situated in the Tasman Sea som six hundred and forty kilometres northeast of Sydney has long been famous for its scenic beauty. Although th island is only ten kilometres long and between one and two kilometres wide the scenery is varied and includes two mountains which rise almost sheer from sea level t heights of seven hundred and sixty-five and eight hundred and sixty-six metres respectively. The central, low-lying residential area is still largely covered with palm trees and, on the western side, an extensive lagoon is protected by the most southerly coral reef in the world. Every year thousands of tourists visit the island, attracted by the

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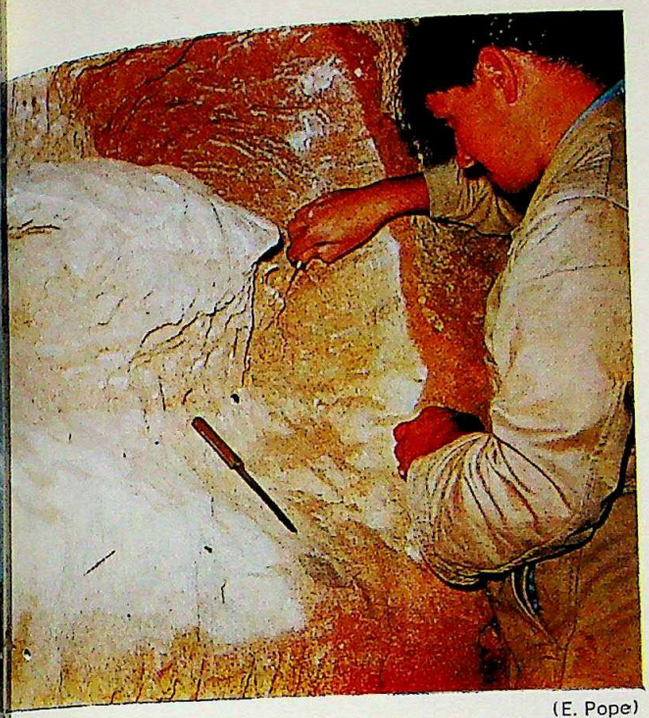

(E. Pope)

Ray Missen, Meteorological Officer, excavating the carapace of the horned turtle.

(Greg Millen)

The skull of a horned turtle, probably an immature male.

prospect of a relaxing holiday in peaceful surroundings, and many return again and again.

The island is also something of a Mecca for scientists, especially biologists interested in its distinctive flora and fauna. Many of the plant and animal species on Lord Howe are peculiar to the island, descendants of forms which somehow reached and colonised this isolated speck in the South Pacific at various times in the distant past. One of the most intriguing inhabitants of Lord Howe, however, was an animal which died out long before man appeared on the local scene and which is known only from its fossilised bones discovered in the sedimentary rocks in the north of the island.

Meiolania platyceps, to give it its scientific name, was a strange form of turtle, the last survivor of a family whose history stretches back some eighty million years to the end of the Age of Dinosaurs, the Cretaceous period. *Meiolania* was, in many respects, a typical turtle, reaching one and a half to two metres in length, with a large, broad shell. However, the really distinctive features lay in the head and the tail. The skull was subtriangular with the eyes set far forward in a rather low position and the rear corners of the head bore prominent solid bony horns, sharp, pointed and often curved like those of a young calf. These would almost certainly have prevented *Meiolania* from pulling its head inside the shell in normal turtle fashion. At the rear end of the shell *Meiolania* had its tail encased in a solid, inflexible bony sheath armoured along the top and sides with pairs of blunt bony spikes.

The first remains of extinct horned turtles, from alluvial deposits in southeastern Queensland, were sent to London in the late 1870's for study and identification by Sir Richard Owen, the greatest comparative anatomist of his day. The turtle bones were mixed, and confused, with bones of a giant lizard, *Megalania,* from the same deposits. Later, when the turtle bones were recognised as such and separated, the animal was called *Meiolania oweni* in honour of Sir Richard. In the early 1880's bones of a related, smaller species of horned turtle, were discovered on Lord Howe Island and sent to Owen who named it *Meiolania platyceps.*

There have been very few new discoveries of *Meiolania* remains in Queensland since last century, but from Lord Howe have come several complete skulls, numerous tail sheaths and hundreds of individual bones of *Meiolania platyceps* making it by far the better known species. Despite the fact that no complete specimens of its skeleton, or even of its shell, had been recovered by the 1920's, most of the structure of the *Meiolania* skeleton was fairly well known. It was clear from the shape and size of its short stumpy legs and its powerful claw-tipped toes that *M. platyceps* was probably a land-living animal whose living habits were probably similar to those of the giant land tortoises of the Galapagos Islands made famous by the studies of Charles Darwin. The exact shape and proportions of the *Meiolania* shell, or carapace, nevertheless remained poorly known and presented a challenge to fossil collectors.

This situation lasted until 1959 when a member of The Australian Museum staff, Miss Elizabeth Pope, then Curator of Marine Invertebrates, paid a private visit to Lord Howe Island. Prevented from collecting marine organisms by a storm, and by rough seas, she joined forces with Ray Missen, a Commonwealth meteorological officer stationed on the island, to visit Neds Beach on the northeast side to look for fossil remains. These were

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commonly known to occur in the friable coral-sand rock which forms low cliff-faces at the southern end of the Bay. A small projecting piece of bone was located, carefully uncovered and found to extend farther and farther into the cliff face. It wasn't long before Miss Pope and Mr Missen realised they had made a momentous discovery, a fossilised turtle shell, apparently complete, and probably the first recorded find of an intact *Meiolania* carapace and much of the associated skeleton. The storm made things difficult by eroding the friable rock but by the time it eased up about half of the shell had been uncovered. With the assistance of several islanders an attempt was made to try to drive a metal sheet under the specimen to support it.

Unfortunately the cyclonic storm unexpectedly worsened overnight and the waves reached the specimen, washing away more of the supporting rock and the exposed portion collapsed in innumerable fragments. Some very fine individual bones of the limbs and the neck were recovered but the precious shell came out in so many fragments that even the most skilful jigsaw puzzle enthusiast would have to admit defeat. Fortunately photographs taken during the excavation show quite clearly the general shape of the rather low, wide *Meiolania* carapace, quite different from the much higher domed shell of the Galapagos tortoises.

The next major find came in 1971 during the excavation of a swimming pool for 'Ocean View', one of the large guest houses at the northern end of the island and midway between Neds Beach and Old Settlement Beach. Mr Alan Wilson, the proprietor, had hired a mainland firm specialising in the construction of pools to carry out the project. The excavation proceeded smoothly until the workmen struck a very hard layer of indurated coral-sand rock, known as calcarenite, which could only be broken up and removed by a jackhammer. During their excavations they noticed what appeared to be fossil bones turning up in the rock but did not realise their significance until a complete skull of *Meiolania* came to light. Photographs were taken of this before its removal and reports reached The Australian Museum within days, but unfortunately by this time the excavations were already completed. The situation was saved by Alan Wilson who had managed to salvage many of the bone-bearing lumps of solid calcarenite which he later forwarded to the Museum, accompanied by most of the skull fragments in a separate box.

After months of delicate cleaning, extraction of the bones from the rock with acid and painstaking reconstruction, my assistant and I were able to rebuild the skull and lower jaw, to reassemble the bones of the neck, the front margin of the shell and much of the upper surface of the carapace. The most exciting finds, and the most useful, were complete specimens of one front and one hind foot, still encased in solid rock. This meant that they could be extracted slowly and carefully, maintaining all of the individual toe bones and claws in their original positions. Thus although our hopes of acquiring a c
plete *Meiolania* skeleton had again been thwarted
new finds threw light on aspects of the turtle which
poorly known.

I had become personally interested in *Meiolania* p
ceps in 1968 when I came to The Australian Museu
Curator of Fossils. It seemed only a matter of time be
a complete skeleton would turn up and I hoped to
able to get there in time to recover it intact. Unfortuna
the 1971 specimen was dug up, in pieces, before n
even reached the Museum and one golden opportu
was lost. A palaeontologist is in a difficult position
fossil localities. An ornithologist can easily make a c
to study a rare, endangered bird like the Lord H
woodhen and the entomologist or ichthyologist
guarantee that he will return with insects or fish sp
mens, respectively. However, until such time as some
discovers and reports a new fossil find to the Muse
it is difficult to justify spending large amounts of
Museum's limited financial support for fieldwork on
mere offchance that a specimen *might* turn up.
palaeontologist has to await the right opportunity,
in my case this came in late September 1977.

Mr Jim Dorman from Lord Howe visited the Austra
mainland in search of archival and display material f
projected Island Museum and Historical Society and ca
to The Australian Museum. He was surprised to disco
how much material of *Meiolania* existed in the Muse
collections and was given copies of available literature
the strange turtle. On his return to the island he visited
the sites where bones had been discovered and quic
located a nice cluster of *Meiolania* bones weathering
in the rocks on Neds Beach. A photograph of these s
to the Museum confirmed the identification and I prom
requested and received the permission and support
the Director and Trustees to visit Lord Howe as soon
possible to investigate and excavate the new finds.
trip was timed to coincide with the inaugural meeting
the Lord Howe Island Historical Society and I receiv
approval also to take over to Lord Howe a plaster
construction of the *Meiolania* skull, made in 1923
J. Kingsley, one of the Museum's most skilled preparat
and modellers. This was to be presented to the ne
formed Historical Society for permanent public displ
in the Island Museum which is currently being develope

On 3 October 1977, laden with a heavy rucksack co
taining my digging equipment and plaster to encase a
fragile finds, I boarded a plane of Advance Airlines
Mascot in Sydney. Less than two hours later we we
circling the island that I knew so well, but only fro
photographs, maps and scientific accounts, and I wo
dered what discoveries awaited me down below.

Before darkness on the same day I was taken to s
the fossil finds and discovered, to my consternation, th
because of the condition of the tides I would be unab
to get my jackhammer and a generator near to the sp

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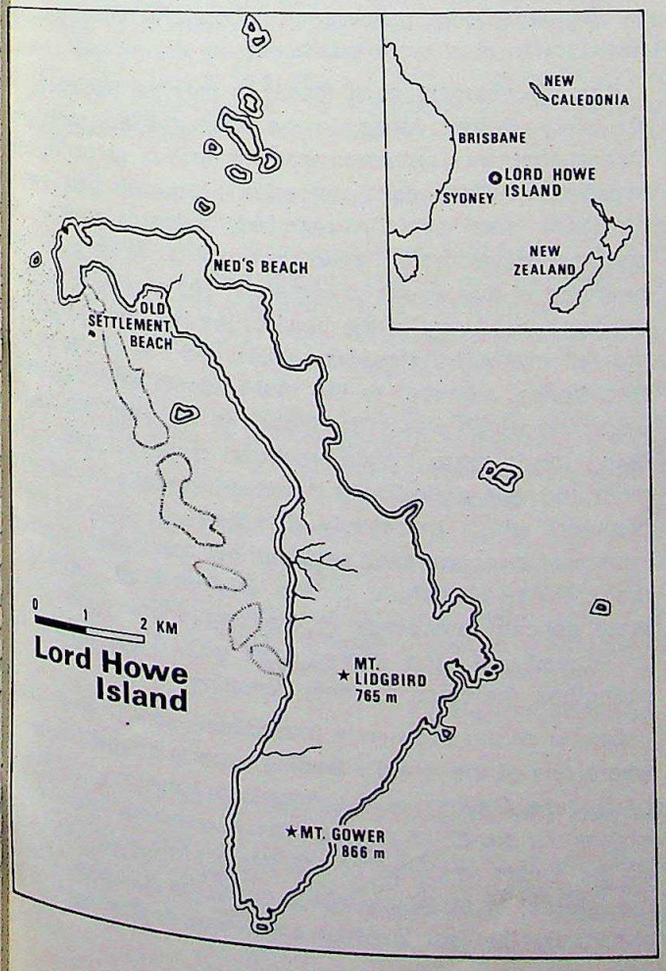
until later the same week. This proved to be a blessing in disguise because it forced me to return to the opposite, western, side of the island to examine the rocks south of Old Settlement Beach which stood largely above high-water mark. Turtle bones had been found there in the past and there was little doubt it was the same formation. The erosive action of the water had sculptured the rock masses and surface into very rugged, sharp-edged shapes which make walking always difficult and sometimes dangerous. The depth of the eroded holes was a bonus because it occasionally exposed fossil specimens below the general surface of the rock.

Somewhat to my surprise the first specimen I discovered was not the remains of the horned turtle but a cluster of delicate, hollow bones of a smallish bird. It was very difficult to see but close examination revealed that most of the skeleton appeared to be present, either just at the surface or still buried in solid rock. This was an exciting find because, although individual bird bones are not uncommon in the ancient turtle-bearing deposits to the best of my knowledge no articulated skeletons have ever been recovered. Shortly afterwards, and with some assistance from interested locals and visitors, I located three other partial bird skeletons in the rocks nearby. All four were safely jackhammered out enclosed in blocks of the coral-sand rock. Until they are prepared and fully exposed, a process which will take months of delicate work, it is impossible to determine whether they represent types of birds still found on the island today or forms which are now extinct there.



Although the same search had located a few weathered *Meiolania* bones it was not until about mid-day on Wednesday 5 October that I stumbled on the most exciting finds, weathering out of the edge of a large free standing block of calcarenite. The first trace observed was a thin white line of bone, a mere two to three mm thick, running horizontally for about forty cm. Closer examination revealed it to be the weathered cross section of a portion of turtle shell but there was no immediate way of telling how much remained encased in the solid rock. The overlying rock layers were soon carved away by jackhammer exposing enough to indicate that, in fact, very little had been lost by erosion, but it took a day of solid digging before the slab containing the shell was safely undercut and finally cut free from the main block. With the assistance of a local resident, Hans Rueckert, the slab, weighing about fifty kilograms, was safely lowered to the sand and washed clean. It immediately became clear that the specimen consisted of a complete carapace, or upper shell, lying upturned in the rock with the backbone and many other parts of the skeleton lying inside.

My excitement at finding and recovering the first complete *Meiolania* carapace can readily be imagined but there was more to come. Another small piece of bone lying embedded in the same layer as the carapace but about a metre away was re-examined and found to be part of a skull. This too was jackhammered out in a solid block, carefully washed and discovered to contain what appeared to be a virtually complete skull, also lying upturned in the rock and almost certainly from the same individual as the adjacent carapace. This was truly fantastic luck because it meant that, for the first time, we would have a means of directly measuring and comparing the relative lengths of the head and the shell in the same animal, an aspect we could only guess at before. The island's electricians who had kindly lent me their massive portable generator to power my jackhammer came to the rescue again and helped me to remove gently the precious fossil-bearing blocks from the beach and back to the local school. News of the finds had gone around the island like wildfire on the bush telegraph and many of the islanders were incredulous to find that they had been walking past an almost complete *Meiolania* shell and skull for years without seeing them. They felt much better when they saw how much—or how little—was exposed in the rock face.

The opportunity was taken to gather all the local schoolchildren together to see the exciting new finds and explain to them how and where they should look for similar remains; I have a feeling that few discoveries will go unrecognised and unreported on Lord Howe in the years to come. On the same evening at the inaugural meeting of the Historical Society the procedure was repeated with the adults after Jim Dorman, the islander

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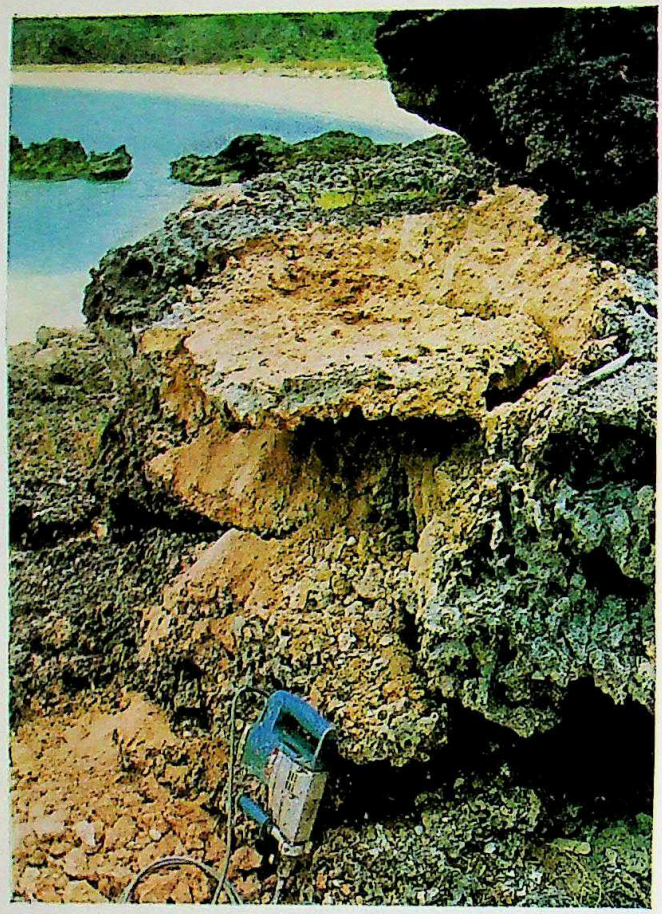

(Alex Ritchie)

Carapace being dug out, south of Old Settlement Beach, and the same one after treatment at The Australian Museum, Sydney.

(Greg Millen)

who had started the whole thing moving, had been ele... the Society's first president.

The last task was to revisit Neds Beach at low tide... the following day to excavate Jim Dorman's original ... of turtle bones. The whole process was keenly watc... by the entire school population who had cycled ac... with their teachers. The specimens, atlhough quite in... esting, contained nothing which was not already d... cated in our collections so I decided it would be m... useful to donate the Neds Beach specimen, when it ... extracted, to the Historical Society for display beside ... skull reconstruction I had brought with me.

Only one problem still remained—the task of se... transporting several large and rather fragile slabs ... coral-sand rock containing the fossil specimens back ... the Museum in Sydney. Here again fate intervened. Fr... Jim Dorman I discovered that the New South W... Department of Public Works was shortly to begin inve... gating likely sites for a new island jetty. To carry out ... work they had chartered a DC3 of Travmar Ltd. to fl... their heavy drilling equipment, the first flight being ... to arrive two days after I was due to leave Lord Ho... The Board of Lord Howe Island had booked the ret... flight to Sydney to carry some twenty-four palm tr... destined for Taronga Zoo. With the permission and ... operation of the Board's representative on the isla... Mr Jim Whistler, the crate containing the fossils w... loaded on to the same plane and, within only five da... of their discovery and excavation, they were safely ba... in the Museum's preparation laboratory ready for ... assistant to start work on them.

The discovery of such fossils is only the beginning ... the story. Robert Jones, in the Museum's Palaeontol... Department, was entrusted with the task of preparing ... specimens. The rock concealing the upturned fu... carapace was skilfully removed, using a variety ... pneumatic percussion tools, a process which took ... best part of five weeks to complete. The results exceed... expectations. Lying in the bowl of the inverted shell w... the left and right shoulder girdles and five of the ma... limb bones, adjacent to the entire length of the origi... backbone which was still attached to the shell. The sk... being much more fragile, required more delicate tre... ment and was periodically immersed in dilute acetic a... (vinegar) which selectively dissolves the calcium c... bonate of the coral-sand rock without noticeably affect... the calcium phosphate of the original bone. Even t... most delicate processes of the fragile braincase co... be etched out, and impregnated with dilute plastic ... strengthen the bone for easy handling.

Details of the finds were immediately sent to New Y... where one of the world's leading experts on fossil turt... Dr Eugene Gaffney of the American Museum of Natu... History, is currently engaged on a complete revision ... all the known material of *Meiolania platyceps*. Much ... the interest in *Meiolania* stems from the fact that it w... apparently the last survivor of a very ancient group

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horned turtles which first appear in the fossil record in the late Cretaceous and early Tertiary rocks of South America, in rocks deposited between about eighty and sixty million years ago. They next make their appearance as isolated skull fragments and horn cores in the Miocene gold-bearing deep leads once mined near Gulgong, N.S.W. In the last one to two million years they are known to have lived in S.E. Queensland (*Meiolania oweni*), fragments have been found near Coolah, N.S.W. and numerous bones and horn cores have been recovered from guano deposits being worked for phosphate on Walpole Island some sixty kilometres south of New Caledonia. *Meiolania platyceps* from Lord Howe Island therefore provides us with the best opportunity to study and reconstruct not only a strange, extinct turtle but its probable habits. Many questions remain to be answered, such as when and how did *Meiolania* reach such an isolated spot as Lord Howe, how long did it flourish there and, perhaps the most difficult problem to explain, why did it die out? As far as we can tell from the fossil remains there were no other large animals on Lord Howe which posed a threat to it. One factor which may have been involved was the widely fluctuating level of the sea during late Pleistocene times which may have reduced Lord Howe to a size where it could not support a viable population of such large, land-living turtles, but there could be many other explanations which are not preserved in the fossil record.

I am tempted to emulate Ogden Nash and finish with the comment that

> I cannot think of anything zanier,
> Than the fact that Lord Howe's *Meiolania,*
> The Horniest turtle of the lot,
> Should have lost the knack of getting begot!

THE AUTHOR: *Dr Ritchie is Curator of Fossils at The Australian Museum, Sydney.*

BOOK REVIEW

JAPANESE PRINTS

THE introduction to the richly illustrated (forty-one plates in full colour) book by Cecilia Whitford called *Japanese Prints* (Thames and Hudson, ISBN 0 500 53014 9), begins with a quotation from the British *Blackwood's Magazine* of 1887, echoing the overwhelming cultural shock that the discovery of Japanese art brought about in Europe at that time. *Blackwood's* article said that '. . . no event in the artistic world has of late years attracted so much attention as the discovery of the wonderful skill in painting possessed by the people of that strange empire in the Western Pacific'.

Apart from its well-written and informative introduction explaining the origins of the modern woodblock print in printing books from wooden blocks (although the first illustrated book by this method was as late as 1650), the book contains brief and informative notes on each of the plates of facing pages. They range from an early hand-coloured print of two men playing the game of *go* on a boat, watched by a woman and a *samurai,* with the boatman smoking a pipe, reclining on the roof by Moronobu, who died in 1700, to a triptych of 1894 showing a naval battle; by this time, the European influence was already clearly showing through the ancient techniques.

As Cecilia Whitford points out, the trade was by no means one way: 'The greatest prints were not produced as high art, but were frankly popular, commercial and expendable, which is why the Japanese themselves could not regard Japanese wood-block prints as great artistic creations until the Europeans had taught them to.'

—DAVID GILCHRIST

A scene from a Kabuki play by Shunshō, showing Kintoki *as one of the followers of a legendary hero. Kintoki was supposed to have gone with his mother to the mountains as a child and grown up with the animals. This print is interesting as showing the use of blocks of colour (in Kintoki's robe)—a technique which influenced European painting at the turn of the century.*

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(Photo: Doug McNaughton, A.I.

TODAY'S INDONESIAN WRITING

Guests of the Australian Government at the Adelaide Festival of the Arts, which ended last month, were three Asian writer Jayanta Mahapatra from India, who has published several books of his own poetry and a couple of volumes of translations; Ce Carunungan, the noted Filipino writer of novels and novellas as well as Djoko Sapardi, Lecturer in Comparative Literature at t University of Indonesia, Jakarta, editor of *Horison*, and a well-known writer. They are shown above with Mrs Rosemary Wight of the Adelaide Festival of Arts Writers' Committee. During his stay in Canberra, on his way to Adelaide for Writers' Week at t Festival, Sapardi was interviewed for *Hemisphere*.—Editor.

Who's writing what, and what kinds of things, these days in Indonesia?

Among the poets is a group of people who are getting better known and more popular in Indonesia. The most popular is Rendra, who visited Australia a couple of years ago; then there's Taufik Ismail, Gunawan Mohammed and Sutardji, from Bali—a rather controversial one, Sutardji.

What is Rendra producing these days?

He is still writing poetry and drama for his own theatre in the back garden of his house in Yogyakarta, and it is still prospering. His latest important play is called *The Town Clerk (Sekretaris Daerah)*, a kind of social protest about the conditions in which some people in Indonesia have to live.

That's the kind of material people are writing just about everywhere in the world, isn't it?

Yes.

What about Gunawan Mohammed?

I think he's the finest poet we have.

Who would he compare with in the English language field?

In the United States (though it's hard to compare), Snodgrass, and in Britain, Ian Hamilton, and Peter Porter, who is an Australian but lives in England.

With occasional visits back home.

Gunawan is a lyricist, with a style very much his own—a very original poet.

How would you classify Sutardji?

He is quite revolutionary in that he introduces ne words into Indonesian—especially dirty words; next t Rendra, he is our best poetry reader, and the halls a always crowded for his readings. He is original, but influenced by poets like e. e. cummings and by the trac tional poets of his native district, which is Riau, th islands lying between Singapore and Central Sumatra.

Coming from the Strait of Malacca, he would probab be influenced by the Malay language as much as th closely related Indonesian?

He always says that nobody in Indonesia has a righ to be a poet unless he comes from Riau. According t Sutardji, you see, the Indonesian language comes fro Riau.

Taufik Ismail was down here a few months ago.

He's writing poetry still, and has done some film scenarios, but I think he is as popular as a poet as fo his film work. Actually a writer considered by many peopl in Indonesia to be one of our best poets is here Australia, at Flinders University in Adelaide. He begar late (he's now over fifty) and has a very distinct style—

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Naughton, A.I.S

he's more intellectual than most and has written a number of good works of criticism. He is Subagio Sastrowardojo.

Then there's Ajip Rosidi, who is Director of the publishing firm *Pustaka Jaya* and Chairman of the *Dewan Kesenian*, the Arts Council of Jakarta. He is a prolific writer and although he's only a litle more than forty, he began writing poetry at the age of thirteen and in all he's produced a total of about sixty books of poetry, short stories and novels.

And what are you writing?

Poetry and criticism.

The second one being the easy bit?

That's right.

How would you classify yourself?

Well that's really difficult. I am simply a lyricist; the subjects are nature and the relationship between God and man and other things like that.

I'm interested to hear you talk about so much activity in film-making. We've had a revival here, which has produced some very interesting work. What are current Indonesian films like?

They are basically commercial, because there is an Indonesian Government regulation saying that everyone who imports films from outside must also produce Indonesian films.

Do they have a big sale, say, in Malaysia?

I think so — at least, the Indonesian films are very popular there.

Are they realist, or escapist?

They mostly deal with the dreams of the common man: there are always very beautiful motor cars, very beautiful women, and the problems are not really those of the man in the street.

In other words, they're not attacking problems of living in the way that our playwright, David Williamson, is doing, analysing Australian society honestly and openly. We used to make the escapist type of film before the war: nearly everyone had a horse, and a big property and lots of sheep and rode a horse and was a hero. So maybe you'll follow the same way, and get to the more realist kind of film.

There are some Indonesian directors who are interested in such films, but the producers are interested in making money of course, and are not interested in films about everyday life. Most of the films are sentimental or for children. The films for children are an important part of the industry. They're not the best, but they sell well because of the demand.

There was a French actor, who died a few years ago, Louis Jouvet, who used to make detective films for money, that he used to finance his own theatre in which he did what he really wanted—producing the great French classics. Maybe an Indonesian director could make money on the popular films and use it for more serious jobs.

The novel has never had much of a place in Indonesian writing, has it?

No, but now they are getting more and more widely read, and some are especially popular. This began in the last few years with the rise of the big-circulation magazines. The editors of the magazines feel they are respectable if they publish fiction; that's why they need many, many writers of fiction for novels and short stories. Usually, they publish one or two short stories, and serialise the novels, and then the novels come out in book form. A lot of this writing is very promising, done by younger writers. Last year, one of the popular women's magazines, *Femina*, held a competition for novelists, and the winner was the Dean of the Faculty of Letters at the University of Indonesia at Jakarta, which shows it was literature. The younger writers, many of them under thirty, include Marga T., La Rose (a pseudonym for a woman writer), Ashadi Siregar, Tegu Esha. A most promising one, writing both popular and serious literature, is Yudhistira Ardi Noegraha. He writes poetry and drama as well as novels and short stories and wins most of the competitions, especially the annual one run by the Arts Council of Jakarta.

Is anyone writing material similar to the poems by Chairil Anwar during the time of the Revolution?

No—it was all too long ago, although the influence of Anwar is still felt, and most of the poets writing now respect his work although they don't write like that any more. There is a very important movement, though, which we call *Puisi Mbeling*, or 'rascal poetry', produced by the younger generation. (*Mbeling* is a Javanese word — not one from Bahasa Indonesia, by the way.)

It wouldn't be fair to use the word that some bands playing here in Australia and elsewhere in Western countries who play what they call punk rock?

Something like that, yes. They started in popular magazines, rock music magazines and ones like that; one of the magazines runs a page for poetry headed *Puisi Mbeling*. The important thing is that it has no roots in the Indonesian poetic tradition. In a humorous way—for that's an outstanding characteristic of this poetry—the young people are trying to attack everything. They make their social and political protest and protest against the older generation of poets and the seriousness of poetry written earlier.

So there are 'angry' writers.

Although they are angry, the most important characteristic is humour. I think the later generation of poets — the one after my age-group (we are in our late thirties) will make greater use of humour in their work. In this field, the one I mentioned, Yudhistira, will make his mark.

Is their anyone in Indonesia now who is actually living from his or her writing?

Again, Yudhistira. He's not living well, but in a recent article he said he can make a living by writing. Last year he published two or three novels, and already this year he has brought out two or three novels — very, very productive. In his writing, he is a realist and has a very powerful sense of humour.

In one way, of course, Indonesian writers are luckier than ours, because they've got a much bigger home market.

That's right.

What are you teaching at the University of Indonesia?

Comparative literature. Last year, I taught creative writing. This year, I'm going to include Australian writing in my comparative literature course because I have done some translations of Australian poems and published them in the magazine I edit, *Horison*, and I plan to make an anthology of Australian poetry. That is one of the reasons for my visit here, as well as to meet the writers and critics. Also, we want to get a course of Australian studies in the Faculty of Letters. I think we will soon have American studies and South Asia studies. For us, Australian studies is very important. We have to know much more about this country.

Someone — an Australian — who has never been to Indonesia said once that she found Australians and Indonesians very similar. What do you think about that?

It's really hard to say, but there is an openness of approach in each country and when I read Australian poetry, I feel that I'm reading something that I know; it's different if I read English poetry or Dutch poetry.

In other words, as many Australians do when they are in Indonesia, you feel at home with it.

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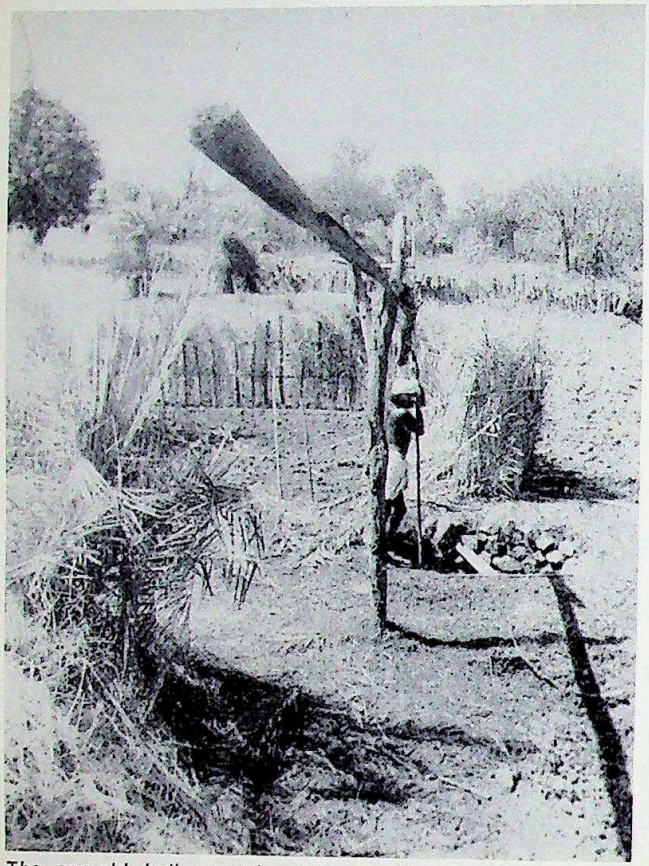
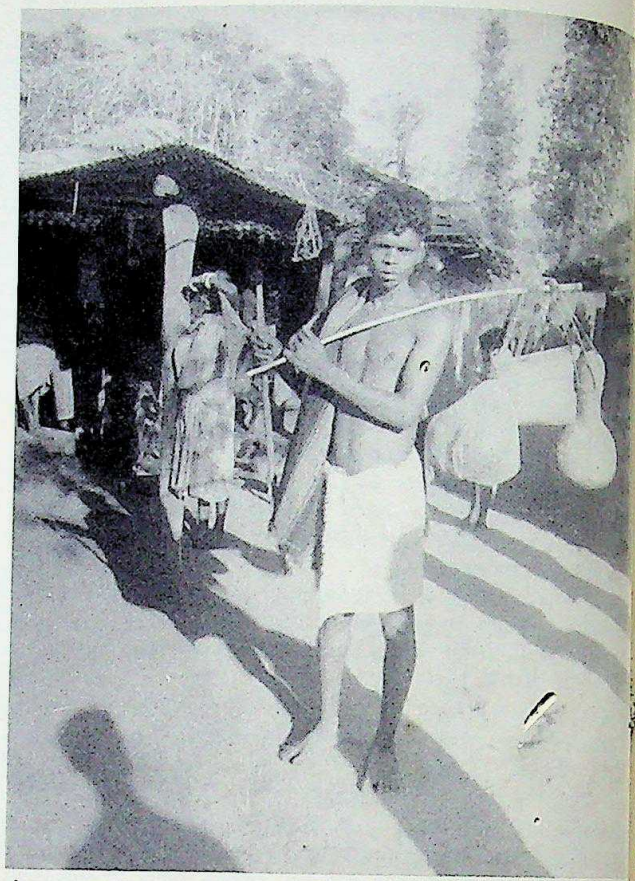


The age-old Indian version of a windlass for drawing water from a well — the fulcrum method.



A young member of the Muria tribe sets out for the week market with gourds and other goods for sale.

A TRIBE ALONE

Trevor Drieber

IT WAS long past sundown when our elderly four-wheel-drive vehicle negotiated the Keskal Valley, the gateway to Bastar district, in the north-east of India, from the Central Indian plain. As we halted to let the engine cool, an orange full moon crept over the lip of the hills hemming in the thickly forested valley on the east. The tall, straight trees of *sal*,* a tropical hardwood, stood like silent ghosts in the pale glow. The quiet was broken only by the screech of gears as heavily loaded trucks climbed the pass to the plateau beyond.

Resuming our journey, we passed four men carrying what looked like a stretcher on their shoulders; they walked swiftly, rhythmically, their bodies moving in unison. We stopped, and saw that their burden was a wooden frame in the centre of which was an image of a god. The men were Murias taking their clan god to a religious gathering of the clans the next day at a village near Narayanpur, the sub-district headquarters we too were headed for.

This was my first encounter with the Muria, the largest of seventy or more tribes whose home is the monsoon forest of Dandakaranya, which covers the greater part of Bastar's thirty-eight thousand square kilometres. The Murias belong to the Proto-Australoid group of races who were the original inhabitants of the Indian subcontinent. Aryan invaders from south-east Europe drove them out of their settlements in the northern and central river valleys to seek refuge in the forest-clad hills farther south, where their life style has changed little over the many centuries since then.

The Murias keep very much to themselves, and struggle to preserve their tribal identity and culture in the face of external economic and social pressures. Although settled farming is spreading among them, with government incentives in the form of money grants and technical aid, they remain largely gatherers of forest produce; an essential part of their diet is the flesh of wild animals they hunt with bow and arrow, spear and baited trap.

It was getting on to midnight when we reached Devgaon, a Muria village a few kilometres from Narayanpur. We parked the vehicle outside the house of the *patel*, the headman appointed by the government. A visit at this hour would normally have been very unwelcome, but our little expedition was headed by an anthropologist from the university at Raipur, the administrative centre of the division that includes Bastar; in the course of his prac-

* *Shorea robusta*

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tical research among the Muria, he had built up a special relationship with their leaders and had earned honorary membership of the tribe. We were assured of a friendly reception.

The *patel,* a wizened little man who seldom spoke, looked us over closely with shrewd, penetrating eyes as we sat in a circle of fire-light. The fire was in the centre of the mud floor of the outer room of the *ghotul,* a dormitory in which all the village children over the age of seven and adolescents of both sexes slept. This outer room, with low walls of mud and a thatched roof, was where males without partners spent the night. Bare-bodied except for the briefest of loincloths, they needed the fire's warmth on nights that were still chilly although summer was advancing. The inner room, built of the same materials but with walls reaching the roof, was where males who had female partners slept.

Membership of the *ghotul* is compulsory for all the unmarried young people of the tribe. Some writers have called it a 'sex dormitory', but it is much more than that. It is the rock on which tribal unity and culture are founded. In it the young learn their duties to the tribe. Their tutor is the village priest, who is usually related to the *patel.* These two are the lawgivers and law-enforcers of the village in accordance with tribal custom. Since Muria tradition puts a taboo on marriage within the clan, the *ghotul* system operates only in villages with mixed clans. Frequent absence from the *ghotul* invites punishment, and may even result in the wrongdoer's expulsion from the tribe.

The basic lesson the *ghotul* teaches is that loyalty to the tribe takes precedence over loyalty to the clan and the nuclear family. The close contact between males and females from pubescence on results in complete equality of the sexes and a total absence of the inhibitions found in many other rural societies.

This is what my anthropologist friend told me as we sat round the fire smoking *beedis,* a type of cigarette made from the rolled leaves of the *tendu* shrub that grows wild in the forest. It was confirmed by what I saw in practice in the next few days, when I visited several Muria villages around Narayanpur.

The object of our midnight call at Devgaon was to ask the *patel* to organise tribal dances for our party, which included two sociologists as well as the anthropologist. The *patel* agreed, after initial objection on the ground that an important tribal festival was scheduled for the next day at a village some distance away and his people would have to set out early, on foot, to be there in time.

While the dancers were changing into ritual costume, the girls also arranging their elaborate coiffures, the tribal welfare officer of Narayanpur took me round the village. He explained that, because Devgaon was close to a township mainly populated by traders, shopkeepers and minor government officials from the plains, it was exposed more than most other Muria villages to urban influences. This was evident in the dress and habits of the younger men, who, while retaining the traditional spancloth across their hips, wore bush shirts and turbans as well. The changed style of dress followed a rise in the standard of living of tribesmen who accepted a settled form of existence.

Rice is the main wet-season crop the tribal farmers grow, followed by maize and mustard. The farmers are also gradually taking to growing wheat, millet and pulses in the *rabi* (cold) season.

But some tribes in remote areas resist inducements to give up slash-and-burn cultivation, which causes great damage to the district's forest wealth and provides only for bare subsistence. These people gather jungle products such as tamarind, the honey of wild bees and the seed of the *sal* and *mahuva** trees for sale at the nearest market. They also sell baskets, mats and brooms made of rushes gathered in the forest, and with the meagre payment they buy rice, salt, cloth and simple household needs.

The rice they grow or buy hardly ever suffices to tide them over the lean season between harvests, so they live mainly on *pej,* a gruel made from a small-grained variety of millet. Their protein comes from animals and birds caught and the fish that are plentiful in the forest streams.

The common drink, taken by the men and women in large quantities, is *sulfi,* the sap of the sago palm, slightly sour and mildly alcoholic. But for festivals a liquor is distilled from the sweet-scented *mahuva* flower. Every village hut has a still for making this liquor, which tastes like vodka, is taken at a gulp, and is very potent.

As the main sowing season approaches in May or June, each village organises a hunt to propitiate the tribal goddess. Each family contributes a member to the expedition, in the course of which any wild animal encountered is slain. This indiscriminate slaughter is decimating the wild life of the district, forest officers say. It is encouraged by outsiders who traffic in the pelts of tigers, cheetahs and leopards, elephant tusks, bison horns and deer-skins.

To conserve wild life, the state's Forest Department has offered to provide goats for sacrificing to the goddess, but so far this offer has had little response. The village priest insists on the customary hunt, and the lure of the money the smugglers offer is too strong.

The villagers keep the surroundings and interiors of their widely scattered huts very clean. The huts lack furniture — even the traditional *charpoy,* a bed made of wooden posts and rope. A few vessels are used for cooking, and receptacles for liquids are fashioned from hollowed, dry gourds. Food is stored in a small enclosed space adjoining the single living room, and a few chickens of indeterminate breed occupy a pen.

Farmers irrigate their fields from wells six to nine metres deep, using the fulcrum method to draw water

* *Madhuca indica*

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up in an earthenware pot. The huts of the prospering have tiled roofs instead of the usual thatch of paddy straw or reeds. Aluminium cooking vessels and plates also testify to the benefits resulting from settled farming.

I was told that the Murias are reluctant to send their children to the schools the government provides because they are needed in the fields and for gathering fire-wood and other produce of the forest. Sometimes old people beyond the age of gainful work are sent to school as substitutes for juveniles.

Family planning is making slow headway among the tribes, mainly because of opposition from local priests. Shamans tell their people that the goddess who rules their destinies does not approve of small families. This agrees with the thinking of tribal parents, who see each additional child not as an extra mouth to feed but as two more hands to work and add to the family larder.

The tribal welfare officer and I watched the village blacksmith at work. Bent and shrivelled with age, h squatted by a wood fire in a hole in the ground unc thatch held up by four poles. A boy operated bello as the smith heated an iron rod.

Back at the *ghotul,* preparations were still going o for the dance recital. The girls' hair arrangements we crowned with chains of cowrie shells, highly prized ornaments. Each young man wore a thin strip of me across his forehead as a decoration. Finally, the dance formed in two arcs, one of males, the other of female in the open space outside the *ghotul.* Between the grou stood a four-piece orchestra with a drum, struck wi palm and fingers, a reed flute, a bison horn, and castane We saw four dances, lasting nearly an hour — strenuo work in the sun. The dancers sang as they wove circles round the musicians.

In the afternoon we drove to Bhinjali, a village abo nine kilometres from Narayanpur, to see the gods seven Muria clans offer obeisance to the earth godde Matagudi. The ceremony took place in a small enclosu near the foot of a tall tree with spreading branches. Th area was tightly packed with worshippers. The ima of the goddess rested on a platform over which flags – traditional emblems of the goddess — fluttered from mast.

The clan gods lay on their wooden frames on th ground nearby. A drum throbbed wildly, a flute shrieke and there was a clash of cymbals. The rhythms, ve different from those we had heard in the morning, we having a hypnotic effect on priests in the centre of t little square.

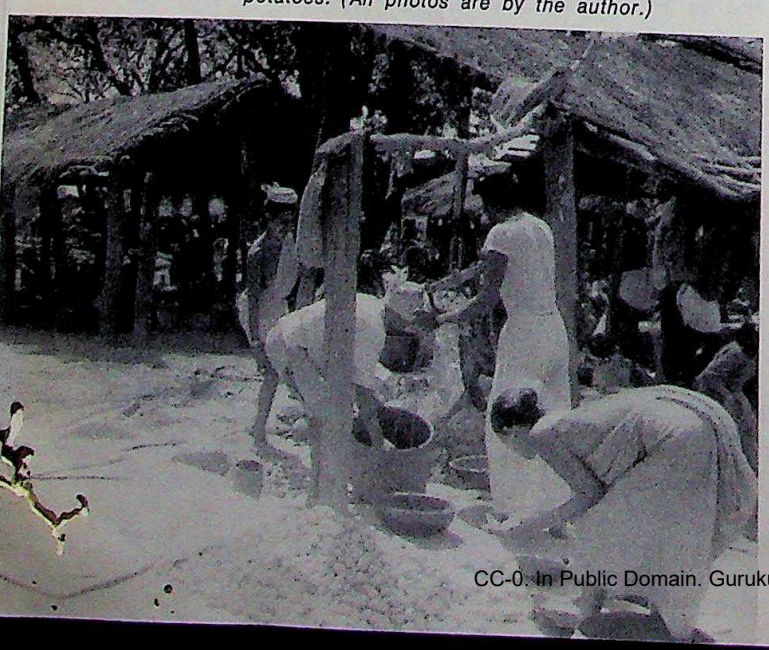
The music grew more frenzied as the spirits of th recumbent gods entered the priests, who swayed ecstasy. Some snatched up staves and beat themselve over the head. Others had steel chains with sharp hoo at one end; they struck themselves repeatedly on the bare backs until the blood flowed.

A fair had sprung up outside the enclosure. Peop from the town were selling sweets, beads and gewga to the villagers, who in turn sought buyers for vegetable dried gourds and wickerwork.

We went to Devgaon again the following evening, guests of the *patel.* There was plenty of *sulfi* to drin then came rice, *dal* (lentils) and chicken. After dinner th inmates of the *ghotul* assembled for the nightly sing song. This is usually a joyful occasion, but this nig was different: one of the girls was to marry next da which meant severing her connection with the *ghot* completely. The songs told of a hard life ahead of he — toiling in her husband's fields, going to the fore daily for firewood and rushes, cooking and doing house work, bearing children and bringing them up. She woul have to switch her loyalty from the *ghotul* to her ma and in time age and death would creep up on her. A they sang, the other girls embraced her warmly one b one; their tears mingled with hers.

The Muria do not give dowries. Instead, the husban

Two men, laden with forest products, on the way to the Sunday market, at which a couple from the tribe shop for salt and potatoes. (All photos are by the author.)



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pays a bride-price in rice, cloth and consumer articles to his father-in-law. Widowers may rejoin the *ghotul,* but not widows; a woman who has lost her husband is expected to marry his younger brother, and if she prefers another man he must pay her brother-in-law to waive his claim to her.

The roads leading to the Muria villages are impassable when the monsoon comes. But this does not deter the tribesmen; lacking even bullock-drawn carts, they carry on their heads the little they have to market. Malaria and malnutrition are their worst enemies, and the children suffer most. No sooner can the boys walk than they are taught to use bow and arrow, essential to their survival in the challenging conditions. All round the tribal villages is primeval forest. The villages are outposts of human life in a vast expanse of *sal* and teak and many other species of tall, straight-growing trees which will soon provide the raw material for pulp and paper mills and other industries.

As I walked through the forest around the waterfall of Chitrakot on the Indravati river early one morning, only the sounds of nature broke the stillness. There was the constant boom of the water falling in four or more streams down a thirty-metre wall of granite into a deep blue-green pool. When the orchestrated shrilling of thousands of invisible cicadas stopped suddenly, as though someone had pressed a switch, I felt a void in my brain; but the sound started again in a few moments.

Though we travelled by day and night and stopped at waterholes, we did not see wild animals. Villagers whose cattle were once taken by tigers and leopards and whose crops were devastated by elephants, deer and wild bear told us these unwelcome visitors are now rare.

We left Jagadalpur, the district headquarters, in the afternoon and reached the Keskal Valley at night. The hills were aglow with fires, caused by carelessly abandoned *beedies* or cigarettes or by friction in the dry summer grass. Such fires destroy saplings the Forest Department plants.

Gusts of wind carried the smell of burning wood to us as we went to bed. But when we woke next morning the fires had disappeared. The forest was enveloped in chill mist. The hills in the distance turned from blue to golden brown as the first rays of the sun touched them.

THE AUTHOR: *Trevor Drieberg, a well known Indian journalist, is the New Delhi correspondent of* The Herald, *Melbourne.*

A simple but effective press for extracting oil from mahuva seeds.

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FROM FOOD TO KINGS

Early Chinese Civilisation: Anthropological Perspectives, by K. C. Chang. Harvard University Press, Cambridge, Mass. ISBN 0 674 2199 6.

A VOLUME of nine essays written at different times (five in the early 1960s and the others in the early 1970s) and covering a wide spectrum of themes, ranging from food to kings, is not the best way to read about any subject—even when they are written by a single author. This is not a book for beginners. On the other hand, the subject is a fascinating one and the author, widely recognised as the best scholar of his generation in this field, has important things to say to those prepared to do some preliminary reading. And the most helpful reading would be the author's own *The Archaeology of Ancient China* (revised edition, 1968).

Eight of the nine essays have been published before, two of them in collected volumes edited by others which have not been widely distributed and three more in journals not easily accessible. The one new study was based on research done in 1963-64; a technical article called 'The Lineage System of the Shang and Chou Chinese and its Political Implications', it probes the marriage system that supported early dynasties and the politics such a system produced. This is a difficult topic, and it is probably a measure of the author's caution that he waited more than ten years to publish his paper. Another technical paper, which he first published in 1962, 'A Classification of Shang and Chou Myths', deserves to be better known and its inclusion in this volume is to be welcomed.

Of the less technical essays, the two public lectures will be appreciated by non-specialists: 'Urbanism and the King in Ancient China', which relates urbanisation to a revolution of social systems and of technology which made it possible for the Chinese to produce their Empire; and 'Changing Relationships of Man and Animal in Shang and Chou Myths and Art', which is also accompanied by some excellent illustrations. One other general survey, entitled 'The Beginnings of Agriculture in the Far East', is a very thoughtful essay summing up the state of knowledge on this question at the end of the 1960s. It still deserves to be carefully read.

But the essay that should capture the widest interest is the longest in the volume, on 'Food and Food Vessels in Ancient China'. This was published only a few years ago, but in *Transactions of the New York Academy of Sciences* (1973), which is not easy to find, so I welcome its reprinting here. The author sets out to look at 'the food habits of ancient China' and really whets one's appetite for a full history of China's distinctive culinary arts. After reading it, I look forward eagerly to reading the new book the author has just edited: *Food in Chinese Culture,* published by Yale University Press.

—WANG GUNGWU

Professor Wang Gungwu is Director of the Research School of Pacific Studies at the Australian National University.

MYTHS REITERATED

Japanese Patterns of Behavior, by Takie S. Lebra; University Press of Hawaii. ISBN 0 8248 0396 5 (hardcover), 0 8248 0460 0 (paperback).

IT HAS BEEN fashionable for some time both in Japanese and Western scholarship to talk about Japanese patterns of behaviour as unique, strange, and fundamentally different from patterns of behaviour in the West. This argument has been repeated with varying emphases in the overwhelming majority of works on Japanese society, including those by Abegglen, Vogel, Nakane, Ishida and Doi. Collectively, they have developed a set of propositions which now predominate in so-called Japanology. Japan is essentially a society where value consensus and social mechanisms for integration work effectively; the Japanese are heavily oriented to group loyalty and lack individual autonomy; Japan has attained a high level of industrialisation without much social conflict or popular protest. At the latest end of a long line of publications advancing these views, we now have Lebra's book ambitiously entitled *Japanese Patterns of Behavior.* The ambition, however, has not been realised in at least five areas.

To begin with, this book uses, or rather over-uses, uniquely Japanese words and phrases in an attempt to dramatise alleged cultural differences. This method is perhaps quite powerful in impressing readers with a taste for the exotic and baffling some scholars not very competent in the Japanese language. While every student of the sociology of language acknowledges that linguistic expressions reflect underlying social relations, he or she should be also aware of the limitations and degrees to which the relationship between the two variables can be sustained. Lebra and many other ethnographic Japanologists seem to carry the correspondence to such an extent that there is almost a one-to-one agreement between the two.

The technique that these studies often use is to make etymological references to terms apparently peculiar to Westerners, without examining in what context and in what ways they are used in contemporary Japanese society. Etymologically, it is certainly true that *okagesama-made,* frequently used in response to 'how are you', means 'thanks to your protection or benevolence' (p. 50). In actual usage, however, it means no more than 'I am fine'. In English, 'good-bye' derives from 'God be with you' and 'bloody' comes from 'by Our Lady'. How many native English speakers today use these everyday terms with such classical connotations?

Similarly, the meanings of proverbs are not necessarily translated into action. To be sure, there is a saying in Japan that 'life is more fragile than the morning dew' (p. 166), which suggests that everything is short-lived. As Lebra correctly points out, this type of belief would be primarily oriented to resignation. However, it does not follow that the majority of Japanese are defeatist in behaviour: the rapid process of Japanese industrialisation seems to point to the opposite. Without precise qualifications, popular sayings cannot be equated with actual behaviour patterns of the people who happen to utter them. Generally, what is *normative* among people is not necessarily *normal* among them.

According to Lebra, *omoiyari* (emphatic concern) is at the core of Japanese orientation; it serves as the mechanism to facilitate consensus even among strangers (pp. 38-39). But clearly, Japanese empathy is not a universal phenomenon which may be called a central value; it is

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limited only to particular settings, especially in-group situations.

It is also doubtful that Japanese society is really regulated by voluntary consensus. Certainly, the consensus thesis is supported by a number of illustrations. Decision-making in formal meetings is often based on consensus agreement rather than vote taking (pp. 29-30); the consensus structure was displayed in the well-organised preparations for the Tokyo Olympics in 1964 (p. 83).

These arguments are all based on the assumption that the actions under consideration are essentially voluntaristic; it is presumed that actors willingly perform these activities. What this type of analysis has lost sight of is both manifest and latent structural constraints which force individuals into situations where they cannot help conforming to the institutional framework of society. Once we remove the voluntarist assumption from these descriptions, we simply see the mechanism by which popular protest and conflict against the prevailing institutional arrangements are contained. Consensus-based decision-making is a conscious conflict management strategy to dissipate latent group conflict and those who do not conform to it are required to face acute forms of sanction.

Furthermore, recent studies such as Aoki's compilation of data on popular disturbance in modern Japan have provided hard evidence to suggest that Japanese society is more conflict-ridden than most Japanologists have intuitively believed. Generally, high group pressure toward consensus within small groups does not necessarily entail societal consensus. On the contrary, *intra-group* solidarity tends to increase the probability of *inter-group* conflict.

This book has paid little attention to diversities and variations of attitude and behaviour among different social groups and across different time periods. As the study assumes that the Japanese share one common set of values and action patterns, it has consistently failed to deal with certain questions. Is there any class difference in company loyalty between white-collar employees and blue-collar workers? Is there any regional variation in family relations across urban centres and rural communities? Have Japanese attitudes towards authority changed from one generation to another?

The one-value assumption is difficult to sustain in a highly differentiated society like Japan; if the Japanese had been consistently socialised into one static set of values transcending time and space, then Meiji peasants and contemporary hippies, conservative politicians and members of the Japanese Red Army would all have the same set of orientations—an odd proposition indeed. The one-value assumption cannot account for social change, deviance, subculture, and conflict which are key dynamics in analysing not only Japan but any other complex society on earth.

The book seems to have accepted many propositions that past anthropological studies advocated without rigorous data-based analysis. It is maintained, for instance, that lifetime employment is a typical manifestation of the Japanese eagerness to belong totally to collectivities (pp. 31-32). However, statistics show that the separation rate of employees (the proportion of employees who have left their companies to the total number of employees in the workforce) was about 17.4 per cent in 1974. In the same year the rate was 14.1 per cent among corporations with more than one thousand employees and 12.4 per cent among male employees in general. Even at a very conservative estimate then, one person in ten leaves his or her firm each year. This means that the average employee in Japan is changing his or her company at least once a decade. It is, then, simply a myth that most Japanese workers do not move from one company to another for the entire period of their occupational career.

A lecturer in Japanese studies was serious at a conference on Japan a few months ago when he mentioned that many of his students thought that Nakane's *Japanese Society* could be an excellent illustration of Australians and Australian society. If it were the case, they might have reasons to read Lebra's book without much modification as descriptions of *Australian Patterns of Behaviour.*

—YOSHIO SUGIMOTO

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THE GREAT SURVIVOR

Samuel Marsden: The Great Survivor, by A. T. Yarwood; Melbourne University Press. ISBN 0 522 84120 1.

IT was the cruel fate of Samuel Marsden to profess in life a love of all men only to be derided by his contemporaries, and judged a hypocrite and a sadist by posterity. Professor Yarwood of the University of New England believes both his contemporaries and posterity have done Marsden a grave injustice. He has spent ten years collecting the material and writing this book to produce a more just and more accurate picture of the man who landed in Sydney to preach the gospel of Christ to the savages of New Holland and the barbarians of the convict community.

Professor Yarwood sets about his labour of love by telling the story of Marsden's life with comments by the author, and occasional implied rebukes to early labourers in the thorny vine-yard of historical enterprises proprietary limited in this country. He rejects the savageries of Malcolm Ellis on the character of Marsden. He will rightly have nothing to do with the caricature of Marsden as the Mahomet of Botany Bay.

Professor Yarwood wants the reader to see the difficulties which a believer such as Marsden inevitably confronted when he attempted to persuade men and women in both high and low places in a tiny convict society to turn away from their wickedness and live. For, despite all the abuse and mockery by some Australian historians, Marsden was no fool. His religion had taught him that the hearts of the sons of men were filled with evil, and that madness was in their hearts while they lived. His religion had also taught that God alone could work the great marvel of stilling such madness in the people.

The problem was in part that those in high places in Sydney were not primarily in Marsden's version of God's plan for mankind. They were prepared to use him as a civil servant in a cassock because his teaching about the punishments his God had prescribed for the riotous and the profligate might reduce crime and disorder in convict society. So Marsden defered to Caesar.

Caesar, and the fawners around Caesar in Sydney were not all that enthusiastic about this man who denounced sinners with such zeal. Marsden's eyes were on the prize of life everlasting. Sydney taught him to understand Christ's warning that in the world all his followers would know tribulation and sorrow. The pity of it was that Marsden did not have the faith or the temperament to benefit from the promise that a faithful servant of Christ can overcome the world. The world hurt him deeply.

—MANNING CLARK

Emeritus Professor Clark is Australia's most distinguished historian.

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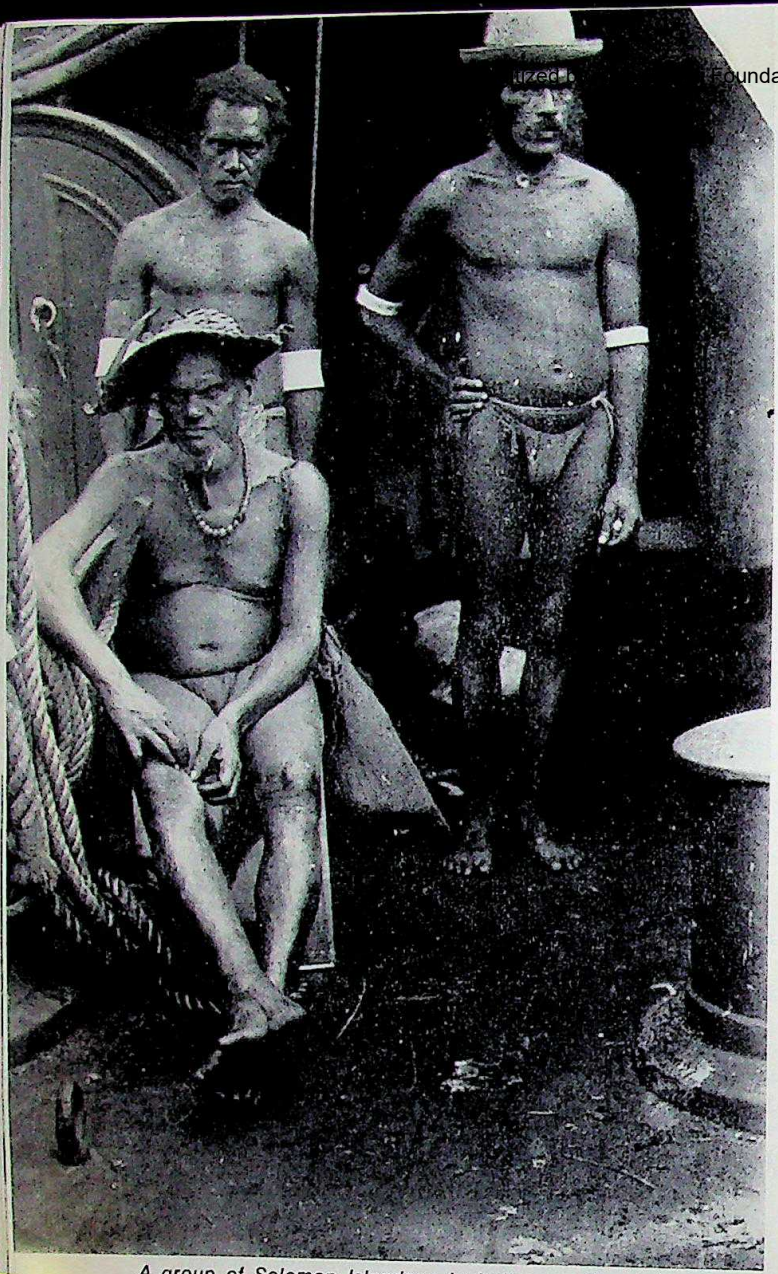

A group of Solomon Islanders, including, on the right, 'Pigeon' Joe, who once interpreted for the British Navy on Guadalcanal.

NO 'MONSTROUS TONGUE'

J. A. Bennett

THE white man in the Pacific on first acquaintance with 'pidgin English' has usually regarded it with amused disdain or outright scorn. An early colonial administrator of the Solomon Islands, Mahaffy, held that it was a 'monstrous tongue, and there are few things more amusing than to overhear such a conversation'. Such attitudes still persist and not only among the vanishing colonials. Although a stable Solomons Pidgin exists many Solomon Islanders believe there is no future in it and prefer English as their second and official language. The numbers are against them as about half the population throughout the islands speak it, unlike any o[ther] indigenous or introduced language.

Like other living pidgins in Melanesia this langua[ge] was born from the trading relationship between Solom[on] Islanders and itinerant Europeans. The first significa[nt] contact by the people was with the crews of whal[ing] ships which came to the Pacific after the exhaustion [of] the Atlantic grounds. As early as the 1800s ships we[re] in Solomons waters. Certain places became places [of] resort to the whalers who, on their two-three year voyag[es] often required fresh vegetables, wood, water and wom[en]. Simbo in the New Georgia group, Mono as well as [the] Polynesian outliers of Sikaiana and Tikopia were popu[lar] and, later, Makira Harbour on San Cristobal. In addi[tion] to trading with these ships, Solomon Islanders sometim[es] joined as crew, sailing all over the Pacific and beyond.

Signs and gestures in such contact relations were [at] time succeeded by verbal communication. Andrew Cheyn[e] one of a few early bêche-de-mer gatherers to come to t[he] islands in the 1830s and 1840s said of the Sikaianas:

> They can nearly all speak more or less broken Engli[sh] which they have picked up through their intercour[se] with whale ships, who often visited to get supplies [of] coconuts and pigs. . . .

Very little is known of this early kind of 'broken Englis[h]' spoken, but whalers had definitely had an influence o[n] language. They also appear to have introduced the n[ow] pan-Melanesian, and often derogatory word, *kanaka*. Crew lists of ships coming via Hawaii west abound [in] 'John' and 'Jack' *kanaka*, the Hawaiian word for 'man'.

Whalers brought back to Sydney tortoiseshell whic[h] they had traded in the Solomons as a profitable side-lin[e]. By the 1850s traders went in search of this and oth[er] island produce. Trade remained small-scale until th[e] 1870s, with two or three vessels a year trading out o[f] Sydney to the Solomons. Trading jargons grew up in t[he] trader- and whaler-frequented ports. At Makira Harbo[ur] in the 1860s the people were using phrases such as 't[ree] carpenter no right kill', 'carpenter no bad man', 'much ba[d] kill carpenter'—neither good English nor good Solomon Pidgin. Those inhabitants who were described as speak[ing] ing English well were the very few who had been to Ne[w] Zealand for some formal education with Bishop Selwy[n] of the Melanesian Mission.

In the 1870s the Labour Trade began with Fiji an[d] Queensland. As it became established there was als[o] an increase in trading. Companies, such as Cowlisha[w] Brothers of Sydney and McArthur and Company o[f] Auckland, opened depots with resident white traders. Their vessels coasted the islands collecting produce tha[t] was later shipped in bulk to Sydney or Auckland. Much of the trade was done in the Western Solomons, bu[t] traders also had bases on Guadalcanal and San Cristoba[l]. In the west, trading in copra and tortoiseshell provided relatively easy access to the valued western goods, particularly iron and steel tools. Because of this and th[e] area's reputation for head-hunting the number of young

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men signing on for Queensland and Fiji was relatively low. Malaita, Guadalcanal and, to a lesser extent, San Cristobal supplied most of the recruits. On the colonial plantations a jargonised pidgin developed as labourers from the ninety-odd language groups tried to speak to each other and to Europeans. These early pidgins came home with the thousands of returns and in some cases were mixed with, or superimposed upon already-present jargons, the products of early whaler and trader contact. Because of this and varying influences in the colonial situation, no fully stable pidgin was observed in the late 1880s and 1890s, particularly in regard to tense and the possessives, as the following examples show

'master belong my father' (1886)

'Man belong ship he plenty ki ki grog. Man no look out. By and by big fellow wind he come. Ship he go down. By and by he finish'. (c. 1887)

'My God! Alec, they kill boy belong you' (1889)

Along with this unstable English-based pidgin came Fijian that many labourers had learned in Fiji. Had it not been for the higher number of Queensland returnees (about thirteen thousand two hundred and fifty compared to five thousand from Fiji) and the lack of Fijian-speaking whites in the Solomons, the pidgin this century might have been Fijian rather than English-based.

Recruiting for Queensland ceased in 1904 and Fiji in 1910. This ended overseas labour migration just when expatriate-owned copra plantations in the Solomons were being established. The desire for greater efficiency and increased profits among traders and would-be planters could be realised in the late 1890s as the fledgling Protectorate government gradually imposed 'pacification' on the Solomon Islands.

Migrant labourers were now employed on the new plantations, usually outside their home islands. These plantations were the nurseries of a stable pidgin with a predominantly Austronesian grammar and English-based vocabulary. The Labour Trade's unstable pidgin provided a basis for the new, but it evolved, stabilised and spread on the plantations. There, young men from various islands were thrown together in conditions vastly different from village life. The white 'masta' (manager) and the local 'bos-boi' (overseer) normally gave directions in pidgin, so a new recruit had to learn the language quickly in order to stay out of trouble and to communicate with other groups.

By the 1930s Pidgin had become a *lingua franca* in all the main recruiting areas—Malaita, Guadalcanal and San Cristobal. No longer were recruiting ships required by law to carry interpreters to explain the contract. The recruiter spoke in Pidgin and prospective recruits or their friends answered in the same language.

Pidgin spread as part of the plantation culture, but it extended beyond that context. This was assisted in part

A crew of Solomon Islanders in the early decades of this century.

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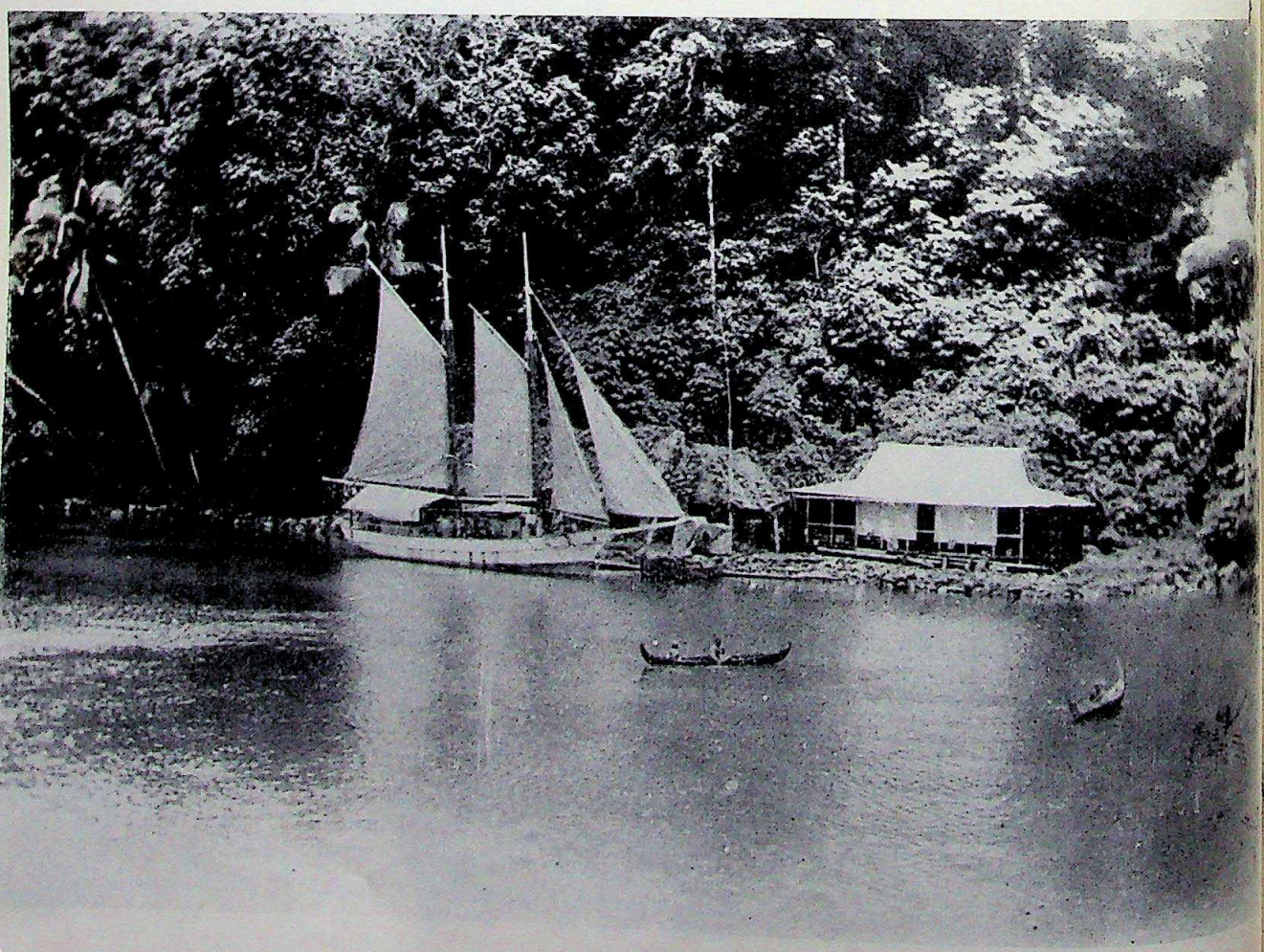
Recruiting labour for plantations in the Solomons. Below: A trader's house and lugger at Simbo, Western Samoa.



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Samoa.

by the Christian Missions, some of which offically and unofficially used Pidgin in evangelical work. Missions were being established in the Solomons at the turn of this century. In general, in the western Solomons (New Georgia, Choiseul and parts of the Shortlands) Pidgin received very little encouragement from the Methodists and Seventh Day Adventists who taught in either a local vernacular or, in some cases, English. In the central and eastern Solomons, there were the Melanesian Mission (Church of England), the Roman Catholics and the South Sea Evangelical Mission. The Melanesian Mission used Mota, a Banks Island language, as its church language until 1931 when there was increasing pressure for English and vernaculars. The Catholics on Guadalcanal and Malaita had Ghari as a church language but Pidgin was also spoken. The South Sea Evangelical Missionaries, both expatriate and native, used Pidgin almost exclusively. So in the east two missions tended to encourage Pidgin.

Despite the lack of mission support in the west Pidgin spread to some extent through labour migration of Malaitans and Guadalcanal men in particular who came in their hundreds each year to work on the plantations of the New Georgia islands, Santa Isabel, Choiseul and the Shortlands.

By the 1930s considerable stabilisation had occurred in Pidgin. The examples from this period show little divergence in structure and lexical items. In addition, they would certainly be quite comprehensible to a modern-day speaker of good Pidgin:

'Which way you talk along me, you bastard?' (1931)

(What did you say to me, you bastard?)

'Me two fellow talk along work. Now him he true me go for hit him master along coconut. Me cross to much because me no want for work. . . .' (1938)

(We talked about the job. Yes, it's true I tried to hit the master with a coconut. I was very upset because I didn't want to work.)

In Solomons Pidgin before the second world war there is no indication of New Guinea borrowings or of German influence, although a few hundred Solomon Islanders had worked on Samoan plantations in Labour Trade days. Solomon Pidgin took its origins from Queensland and to some extent Fiji where the planters were English speakers. This input of English words was constantly reinforced pre-war because almost all the white population was English-speaking.

Looking at the language then and now it is evident that not only is English one of Pidgin's parents, but this parent had an Australian background. Considering the Queensland connection and the Australian nationality of many of the Solomon planters this is not surprising. There are some Pidgin words such as *larikan* (larrikin), *spel* (a rest, or spell), *bugarup* ('buggered-up', to be broken or useless), *niu chum* (new chum) and perhaps *rous* (to rouse on, to castigate), *karangge* (cranky), *lilibet* (a little bit) which came from Australian English or slang. Some of these are being discarded by today's young speakers who have more appropriate expressions to fit the contours of a changed social and economic setting. *Larikan* is being superseded by *liu* which is only a partial equivalent and *niu chum*, a term applied to a new recruit on the plantations, is declining in use as Solomon Islanders have now wider work opportunities.

The second world war shattered and totally destroyed the order of the white planters' world. It cleared the way for political and economic changes in the Solomons, some of which were conceived in embryonic form when Solomon Island labourers lived alongside large numbers of American troops in camps on northern Guadalcanal. Here, as members of the Solomon Islands Labour Corps, they were exposed intensively to English speakers. New words were incorporated into Pidgin, such as *jo* (American), but most were discarded as the machinery of war was dismantled. One word perhaps survives, *staka*. During the war the S.I.L.C. spent most of their time moving supplies around and putting them in *stacks*. To the Solomon Islanders these stacks represented an enormous amount of goods and wealth, so the word came to mean 'a lot of', 'plenty', or at least so goes one version of its origin.

The war experience also saw the first widely known secular songs in Pidgin, 'Raisi' (about the rice ration) and 'Japani ha! ha!' (about the Solomon Islanders and the troops defeating the Japanese). Today there are many Pidgin songs, but these still remain old favourites.

Since the war the government has aimed for universal primary education. Until 1974 this was, in theory, in English. English is used by Solomon Islanders in education, administration and for communicating with the wider world. However, as so many Solomon Island children in the past have completed only three or four years of primary schooling, their grasp of English is rudimentary and quickly becomes Pidgin, especially with the influence of Pidgin radio broadcasts and the usual experience of a period of urban employment. Honiara is the biggest town and the capital, but the regional centres of Aoke, Kira Kira, and Gizo offer some paid employment. Urbanisation, the radio, and the presence of a modicum of education have not only assisted the spread of Pidgin, they have also made it accessible to women. Pre-war, since Pidgin was part of the almost totally male plantation culture, few women learned to speak it. With the growing number of women speakers the potential for creolisation is increasing, but this can occur only if couples live outside their home districts which usually means in an urban centre. At present there are one thousand three hundred Solomon Islanders whose first language is Pidgin.

Solomon Islanders live predominantly in villages, with less than 10% of the population in the towns. Yet modern Pidgin reflects a heavy input from the urban experience. The language has to cope with political, economic and social concepts that come from the wider world. Thus many new English words see 'pidginised' to convey the increasing complexity of society: *ediukesin* (education),

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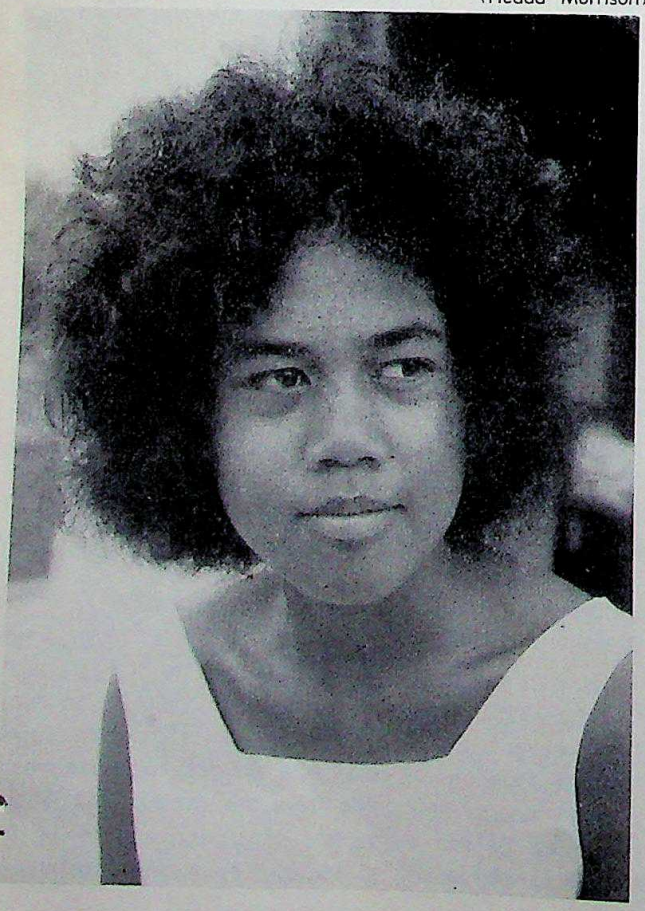
(Hedda Morrison)

An employee at the Auki Airport, Malaita and a student at Selwyn College, Honiara. (Other photographs by courtesy Judy Bennett.)

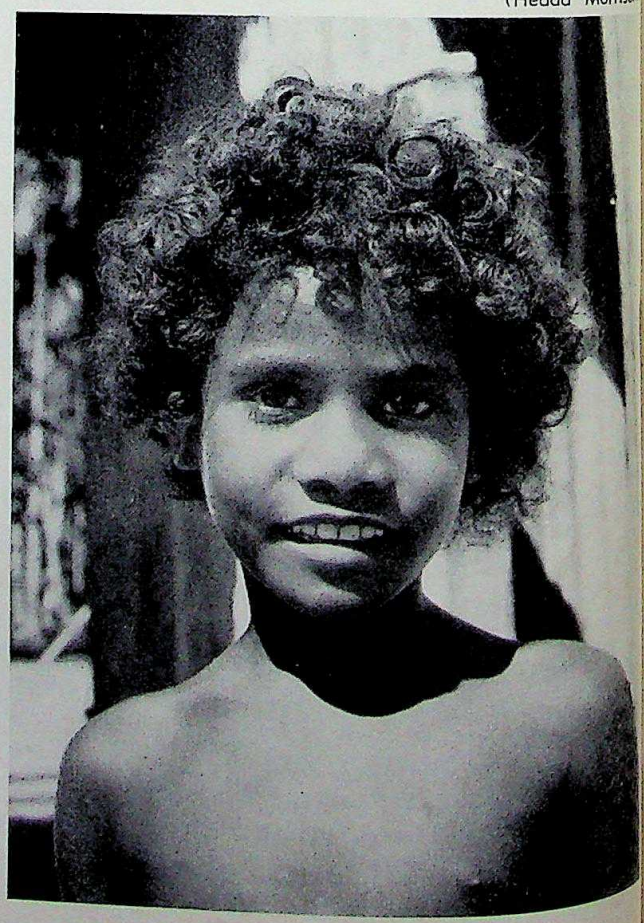
(Hedda Morrison)



hedikwata (headquarters), *kolektem* (collect), *kosi* (cour... are but a few examples. Like governments everywhe... that of the Solomon Islands has a propensity for ru... making and this is reflected in the growing use of t... tense indicators *shud* (should) and *mus* (must). Mode... Pidgin shows increased use of connectives and su... ordinate clauses as well as of the prepositions 'fo' (fo... and 'bekaus' (because). While these may be indicati... of the influence of English grammar as well as vocab... lary, there are other developments which show that Pidg... 'bilong Solomone' is a living language of the ordina... people. For example, a definite non-English grammatic... pattern is the use of the particle *ia* which refers back a... gives emphasis: 'Long niu sistem ia everi shul lo... Solomone . . .' under this new system every Solomo... school . . .), 'Disfela man ia . . .' (this particular man . . . More significantly, genuine idiomatic expressions a... developing usually reflecting life in the towns, for example... 'Mi lusim pasport bilong me' (I can't go back home no... can't return because I've been away too long). Pidgi... as the language of the intergroup communication and ... means to conceptualise entirely new ideas introduce... from the west, is lending words to many of the olde... languages of the Solomons. Likewise some peculiarl... Melanesian concepts mean that words are gradually being incorporated into Pidgin from the indigenous languages particularly those of the dominant urban migrants, th... Malaitans, for example: *liu* [noun] (a person moving

A youngster at West Honiara.

(Hedda Morrison)



around with... maker, a dr... e.g. to walk... to beg). T... mittently en...

As many... there is n... difficulty in... use of new... certain you... ing Service... on the rad... for the rein... Island Publ...

In additio... areas in P... few regiona... lary, the pr... patterns of... in the follo...

'Pere pik... natemu mv...

'Mbele n... no wanden...

([You] a... breasts [an... you as a w... concern S... but do whe... the questi... political iss... in Pidgin, ... Solomon Is... spelling w... controversy...

Finally, ... Islanders' ... will determ... cause it is ... world. Oth... and would ... been this, ... from, say, ... Ana. It has ... nationalism ... the whisp... Pidgin's v... impossibili... people.

The author ... and S.E. A... Other artic... Pidgin (Vo... No. 12), S... (Vol. 20, N... English (Vo... No. 8).

Australian ... Vol. 18, No...

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around with no set purpose, an idler, a potential trouble-maker, a drop-out), *liu* [verb] (to act as any of the above, e.g. to walk about with no set purpose), *osoos* (to flatter, to beg). These mirror survival strategies of the intermittently employed in the urban wage-labour context.

As many of these innovations emanate from Honiara there is mild resentment as the village people find difficulty in understanding some of them, particularly the use of new English words. As well as this lag factor, certain young trendies in the Solomon Islands Broadcasting Service play fast and loose with the Pidgin language on the radio, so much so that in 1974 there was a call for the reintroduction of Pidgin examinations for Solomon Island Public Servants.

In addition to this tension there are two further problem areas in Pidgin's current development. While there are few regional differences in Pidgin's grammar and vocabulary, the pronunciation is heavily influenced by the sound patterns of the various vernaculars. This is well illustrated in the following given by Francis Bugotu:

'Pere piki para, neki i rongo para; susu i sirake, mi no watemu mwarity' (San Cristobal)

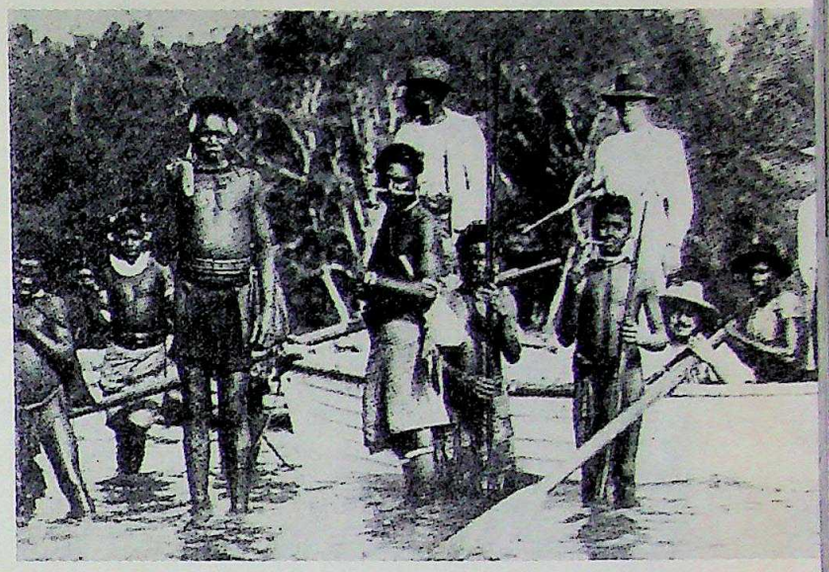
'Mbele mbiki pala, neki i longo pala; susu i silake, mi no wandemu mariti' (Roviana)

([You] are very fat, [your] neck is very long, [your] breasts hang loosely, I don't want to marry you [or want you as a wife]). Such differences do not appear to greatly concern Solomon Islander speakers when they converse, but do when they are written down. As Bugotu points out, the question of a standard orthography is 'almost a political issue'. With the publication of the New Testament in Pidgin, the efforts of a Pidgin Committee and the Solomon Islands Christian Association, standardisation in spelling will probably emerge, but not without some controversy.

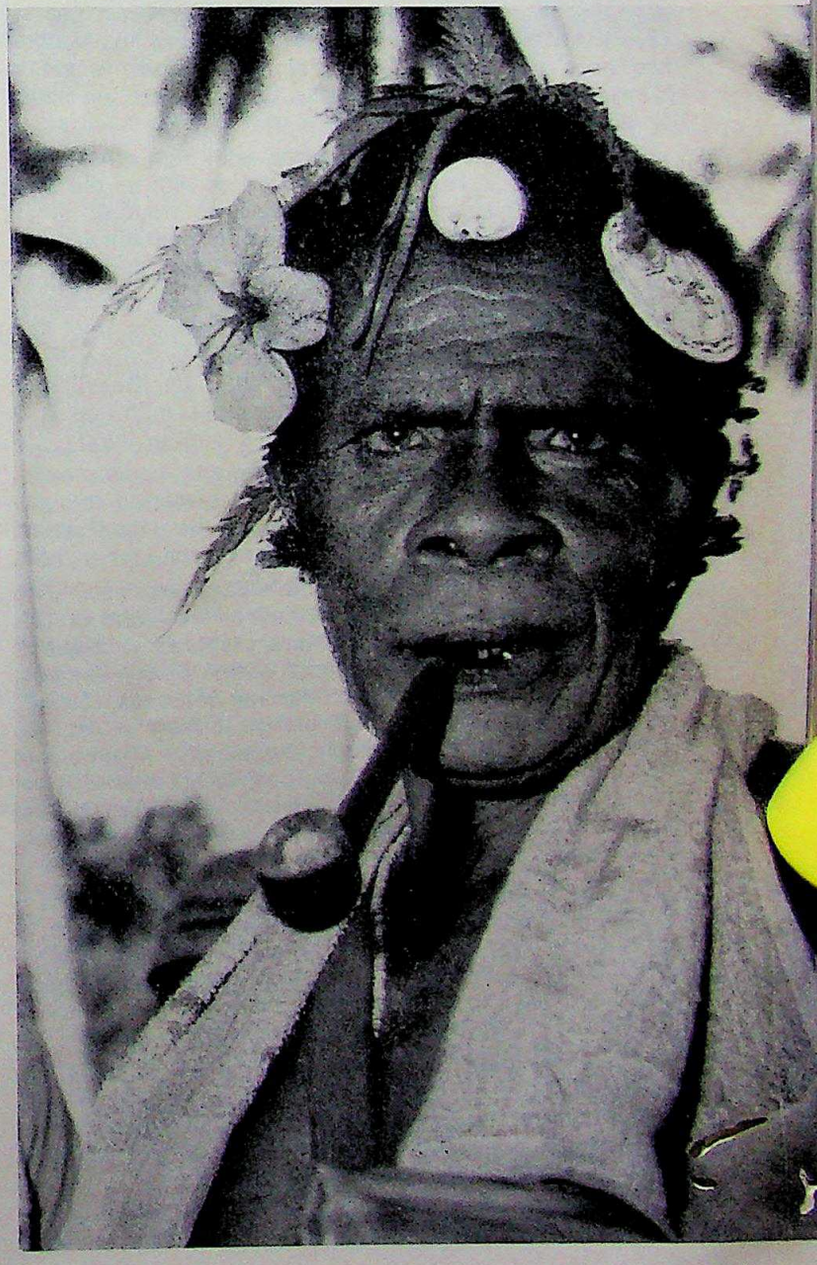
Finally, there remains the question of the Solomon Islanders' own views on Pidgin as they are the ones who will determine Pidgin's future. Some favour English because it is a medium for communicating with the wider world. Others see Pidgin as a 'masta'— servant language and would like to discard it. At times it may well have been this, but it alone has enabled the ordinary villager from, say, the Shortlands to talk with people from Santa Ana. It has facilitated the growth of early Solomon Islands nationalism and has the potential to further it. To heed the whisperings of the old colonial ghost may muffle Pidgin's vibrancy for a time, but to silence it will be an impossibility simply because it is the language of the people.

The author is a Research Scholar in the Department of Pacific and S.E. Asian History at the Australian National University. *Other articles dealing with linguistics include* New Guinea Pidgin *(Vol. 20, No. 11),* Austronesian Languages *(Vol. 21, No. 12),* Singapore English *(Vol. 19, No. 4),* Filipino English *(Vol. 20, No. 2),* Australian English *(Vol. 20, No. 10),* Indian English *(Vol. 22, Nos. 1 and 2),* New Guinea Languages *(Vol. 15, No. 8).*

Australian Aboriginal Languages have been dealt with in Vol. 18, No. 2; Vol. 18, No. 1; Vol. 20, No. 12.



Another recruiting scene and an elder at Malaita, Solomon Islands. (Portrait by Hedda Morrison).



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PAINTER OF SIGNS

The Painter of Signs, by R. K. Narayan; Heinemann, London, 1977. ISBN 434 49602 2.

THEY say that India has seven hundred thousand towns and villages. The figure really should be seven hundred thousand and one. The one the statisticians and the demographers forget to count is Malgudi, that southern Indian haunt of comic eccentrics, gentle maniacs and original philosophers.

Malgudi is R. K. Narayan's town. He made it up. He populated it. He describes it. And yet to Narayan buffs, all over the English-speaking world, Malgudi has a most persuasive reality. People planning trips to India hope to go there. People who have already been cannot be persuaded that they did not visit it.

Narayan has used Malgudi many times as the setting for novels and for short stories. Ten of his novels have been set there in the past. Now there's been a gap of several years without a Narayan novel. But the waiting has been worth while. *The Painter of Signs* is set in Narayan's town, and has all the wryness and the satire of the earlier works.

Raman is the hero, a sign-painter with high artistic and ethical standards. He's a young bachelor with an old aunt to look after his house for him, and no troubles at all except for aesthetic battles fought with superstitious and commercially corrupt customers. Until Daisy appears.

Daisy is something quite outside Malgudi's experience, and Raman's. Daisy is a beautiful, self-sufficient, cool and liberated Indian girl passionately devoted to the cause of population control. Her mission is to roam the villages spreading the view that two children per marriage is a maximum, and that none at all is a desirable thing.

Daisy needs signs with which to spread her message, and signs painted on existing walls are preferred to signs which have to be nailed up and can be taken down. So Daisy takes Raman with her as her official sign-painter.

There are a lot of people in the villages—priests, wise old men and women, young mothers-of-five—who do not care for Daisy's message, and are prepared to argue it very forcibly. Often Raman must come to her defence, though he doesn't care much for her message himself, and sees is as a dangerous challenge to his own desires. Poor Raman has fallen deeply, hopelessly, incurably in love with this strong-minded girl, despite his doubts about her purity. Can anyone so obsessed with the sexual activities of other people possibly have a clean mind, he wonders?

The irony of their situation is that the cool Daisy is a passionate idealist, while the passionate Raman longs to bring a new Age of Reason to the world. 'I want a rational explanation for everything', he says. 'Otherwise my mind refuses to accept any statement. I'm a rationalist, and I don't do anything unless I see some logic in it'.

Or unless Daisy is dictating it. The two lead an uncomfortable life on the road from village to village, and Raman can see no logic in that at all. Daisy doesn't care for comforts, conveniences, soft beds and cool baths on the journey. 'Let us', she says, 'live for a while as millions of our population live; otherwise we will never understand our own people'.

Narayan makes of their trek, their love affair and th philosophic arguments a gentle and highly comic sa with a meaning that spreads far beyond Malgudi. It's book about the relations between men and women in modern world, about public good and private need, a the futility of hoping for perfect endings.

R. K. Narayan's work has often been likened to Eve Waugh's. Their books are of the same broad gen certainly, but Narayan's work has a sort of Indian no violence about it that takes a lot of the bitterness o of the satire.

—BARBARA JEFFER

Barbara Jefferis is a distinguished Australian novelist.

AUSTRALIAN WRITERS

Australian Writers and Their Work: Oxford Univers Press: Melbourne: *Marcus Clarke,* by Michael Wildi (ISBN 0 19 550508 5); *Drama,* by Margaret Williams (ISB 0 19 550407 0); *Charles Harpur,* by Judith Wright (ISB 0 19 550534 4).

THERE are now, including these latest ad itions, thir four titles in this excellent series which len s concise b admirable perspectives to the study of Austra ian literatur

Marcus Clarke (1846-1881) and Charles H arpur (181 1868) are respectively foremost among Austra a's earlie novelists and poets. Michael Wilding pays due egard Clarke's considerable output in fiction, non-fict n a drama—all accomplished in a short-lived career of t five years. Wilding describes him as 'one of the first g internationalists in Australian writing'. There is a compr hensive analysis of *For the Term of His Natural Life,* s one of the greatest novels in Australian literature, whe Clarke recorded indelibly for all time the horrors a brutalities of the convict system.

It is appropriate that Judith Wright, perhaps Australia greatest contemporary poet, should attempt an assessme of Harpur—in her words, 'Australia's first poet of s tained significance'. Although his work was for the mo part imitative of English poetry, with an Augustan a Miltonic style and often a ponderous poetic diction, M Wright is able to show with many quoted examples, th Harpur introduced into his work 'a surprising number themes that were significant in Australian poetry'.

Margaret Williams covers all aspects of Australi drama from the melodramatic output of the last centu to the more sophisticated writing of the present e characterised by the plays of Patrick White, Alexand Buzo, Jack Hibberd and David Williamson. She pa adequate tribute to the pioneer dramatist of the earli years of this century especially Louis Esson whom s sees as 'the representative Australian dramatist not o of his generation but all of Australian drama from me drama to *The Doll*'. She astutely places *Summer of t Seventeenth Doll, The Shifting Heart,* and *The One D of the Year* as 'a sudden and shortlived flowering naturalistic drama with a suburban setting in the la 1950s and early 1960s', but already now becoming peri pieces. Miss Williams looks forward to the capacity Australian dramatists to move beyond limitations wh have been imposed by 'the characteristic dramatic p terns which have been generated by the Australian ethos

—CLEMENT SEMMLE

Dr Semmler is a distinguished Australian critic.

The Mogul

A New His sity Press,

AMERICA independe imperial I taken seric turn. Yet, a steady l by the vir this stage. Indian hist at the Univ So we ha comprehen after anot original bo it neverthe so thorou and reliabl history, wh words, a g everything

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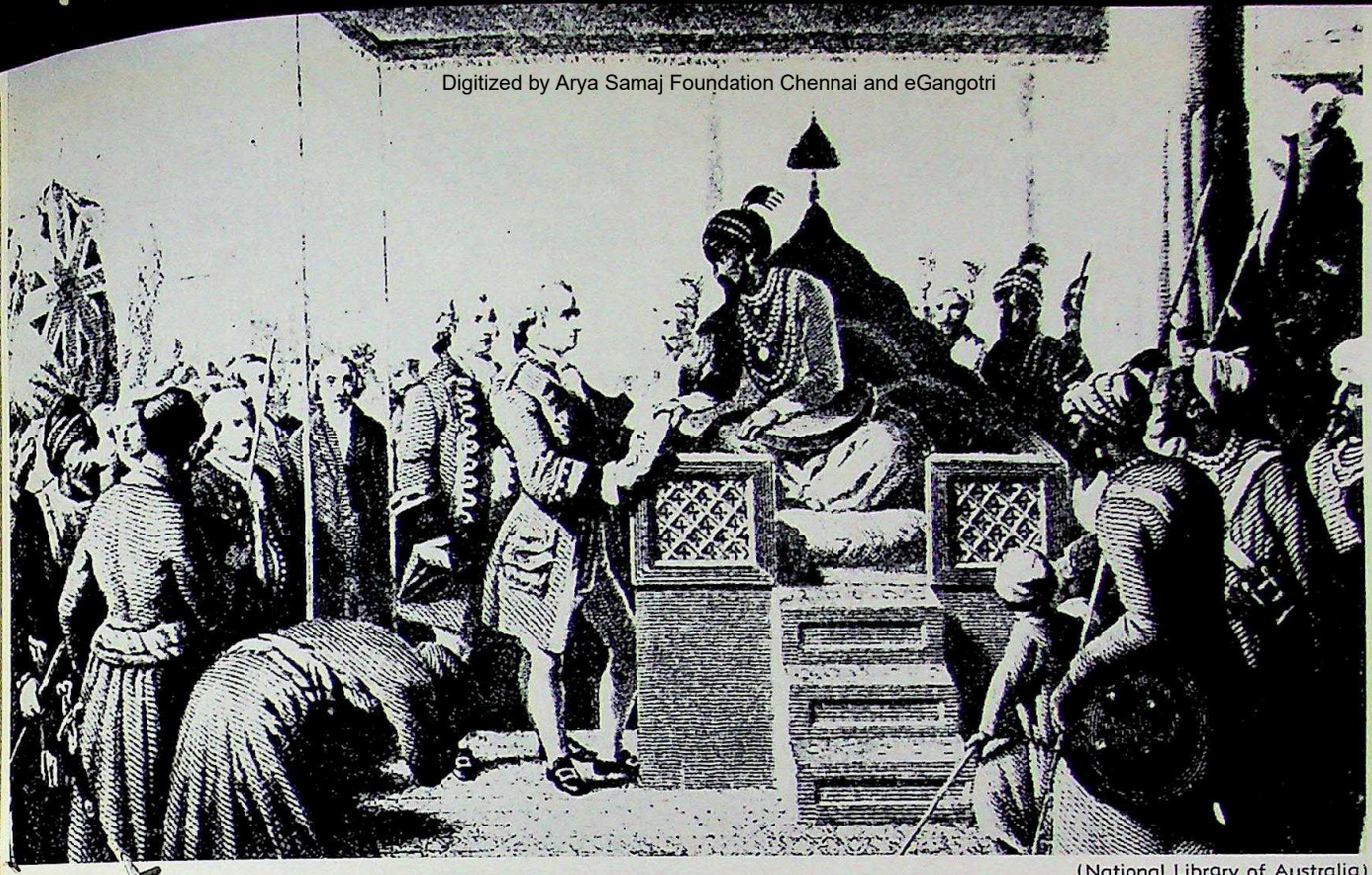

(National Library of Australia)

The Mogul ruler Shah Alam handing to Robert Clive the formal grant of sovereign rights in Bengal. (Picture reproduced from A History of India *by M. Edwardes, by courtesy of the publishers, Thames and Hudson Ltd.)*

INDIA UNLIMITED

A New History of India, by Stanley Wolpert (Oxford University Press, 1977), 471 pages. ISBN 0 19 502154 1.

AMERICANS have had a love-hate relationship with independent India, replacing that of the British with imperial India. Indeed, it is the fate of most who are taken seriously by India to be fascinated and repelled in turn. Yet, if you can stay some distance, there is a reward: a steady love, which accepts the faults and is not awed by the virtues. I suspect Professor Wolpert has reached this stage. He first visited India in 1948, began to teach Indian history in 1958 and is now, as professor of history at the University of California, wise and full of knowledge. So we have a very comprehensive history of India—too comprehensive, some might say, too much of one thing after another. Yet, given that this is not a searching or original book which unfolds a new theory of Indian history, it nevertheless is no slight achievement to cover the field so thoroughly, producing a quick (it has a good index) and reliable reference on the well-known events of Indian history, which means four to five thousand years. In other words, a good book for beginners and for those who know everything but cannot remember the dates.

The chapter headings tell the story: The Ecological Setting; Indus Culture; The Aryan Age; The Classical Age; The Impact of Islam; Great Mughal Glory; John Company Raj, Indian Nationalism—The First Movement; The Impact of World War Two; The Nehru Era; Indira Raj. There is not much one can say about a book so uniformly and conscientiously successful within the limits it sets itself, but a word or two of criticism may help to suggest what these limits are. Occasionally, Professor Wolpert gets carried away, as when Ashoka's pillars are described scattered about India 'like mighty ribs supporting the sky'. I'm not sure that this is a good image for these needle-like pillars, in any case, but the lift of language strikes an exultant note which makes one think about the author's judgement of this section of his history. More substantially, while the pattern of historical events is weighty and authentic, so much is packed in that the story tends to run on invisible threads, so that eras come and go and this or that impact is absorbed in a fashion that is almost mystical. Of course, what *really* happened in history is a question to which there have been many answers and the merit of Wolpert's book is that it orchestrates those which have relevance to a political-military-administrative history, which is what this is, with some sampling of economic, cultural and spiritual influences. But the best history books, surely, are those that ask important questions about the events they describe. The unfortunate effect of this very authoritative book is to leave an impression that the history of India leaves no unanswered questions. This is a particular disadvantage now, when the election of March, 1977 has released new political forces. I would like to have had more on regional differences and on Rajni Kothari's theme of politisation of caste, which always seems to me an essential explanation of Indian democracy. I also found Professor Wolpert's treatment of the British Raj a little austere. To be sure, the British were in India for money and power. They were all arrogant and most were cruel. Yet I wonder whether you can explain the Raj without its mystique, the glimpse the pragmatic British got in India of 'something more', which you find in the novels of Paul Scott and in the character of Mrs. Moore in *A Passage to India*.

However, these are quibbles. The point to be made about this book is not that it has occasional shortcomings, but that it is accurate, fair and informative. Its orthodoxy may even be an asset: a standard text to have on hand as India itself writes the next chapter.

—BRUCE GRANT*

** Mr. Grant is a well-known political commentator and former Australian High Commissioner to India.*

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RECENT POEMS

IRON KNOB (S.A.)

There is iron everywhere:
iron crows bark their iron calls,
men with arms and eyes of iron,
women who hint of steel;

the sun's light at metal angles
through trees like stunts of iron,
rusted trunks and ferrous boughs
like khaki twists of steel.

The town's heart an iron mountain:
long shifts gouge its ochre gut,
breathe its life of iron dust,
lungs rusting to suffocation.

At night in pubs of brawling talk
men drown a stupor of sun and dust,
the day's cruel dance of light;
women, gnarled as the dead horizon,

resign their shift of dreamless days,
warn daughters against hope,
harden like alloy in the blast of years,
the endless riot of heat;

and forever the iron-black crows
bark their iron coda, an iron distance
corrodes the mind, the eye's keen nerve,
burns a desert in the heart.

—ROD MORAN

A PENNY FOR THE GUY

Days were when
A penny for the Guy
Was reward enough
For youthful industry.

Then yearnings
Rake the jagged rims
Of old escarpments
For unsated whims

And penny-wise
Plays Caliban
To the fetch and feint
Of the magic man.

—ANTHONY TURNER

THE WALK

Who said:

'Time salves
The wound
And draws a pall
On what is dead'?
I walked with you
A road that I
Once walked upon
An earlier day
You hadn't shared,
And did not hear
The tender things
You must have said.

Wet ferns and river sand
Stirred drifting memories,
The new day woke
The old one, blanched,
But only half-asleep,
Which had the power
To hurt
And hurt again.

—ALFREDA DE SILVA

PRELUDE

At dawn
Stars cluster on the frost,
Mirrored under blue eaves
Among rafters of oak, wet and still,
Pointing to the darkening clouds, now flying
Pennants of orange and tatters of gold;
Flags of first light
Painting wet bark with mist,
Bursting the columns of trees to flame,
As leaves fall softly like paper hands
Upon the mossy dark of their mother's bed,
Where young roots and worms thrust and suckle
The tiny river's murmuring descent.
And tender with cold
I put down my bow at the water's edge;
A little giddy, like a young deer
Beneath the mast of the tallest tree;
Like a young deer I listen for your steps,
I turn and sniff the long wind
That rustles your skirt in the tall reeds;
Like a fox at the river's edge
The bright eye of my hunger
seeks you out.

—ROBERT CROCKER

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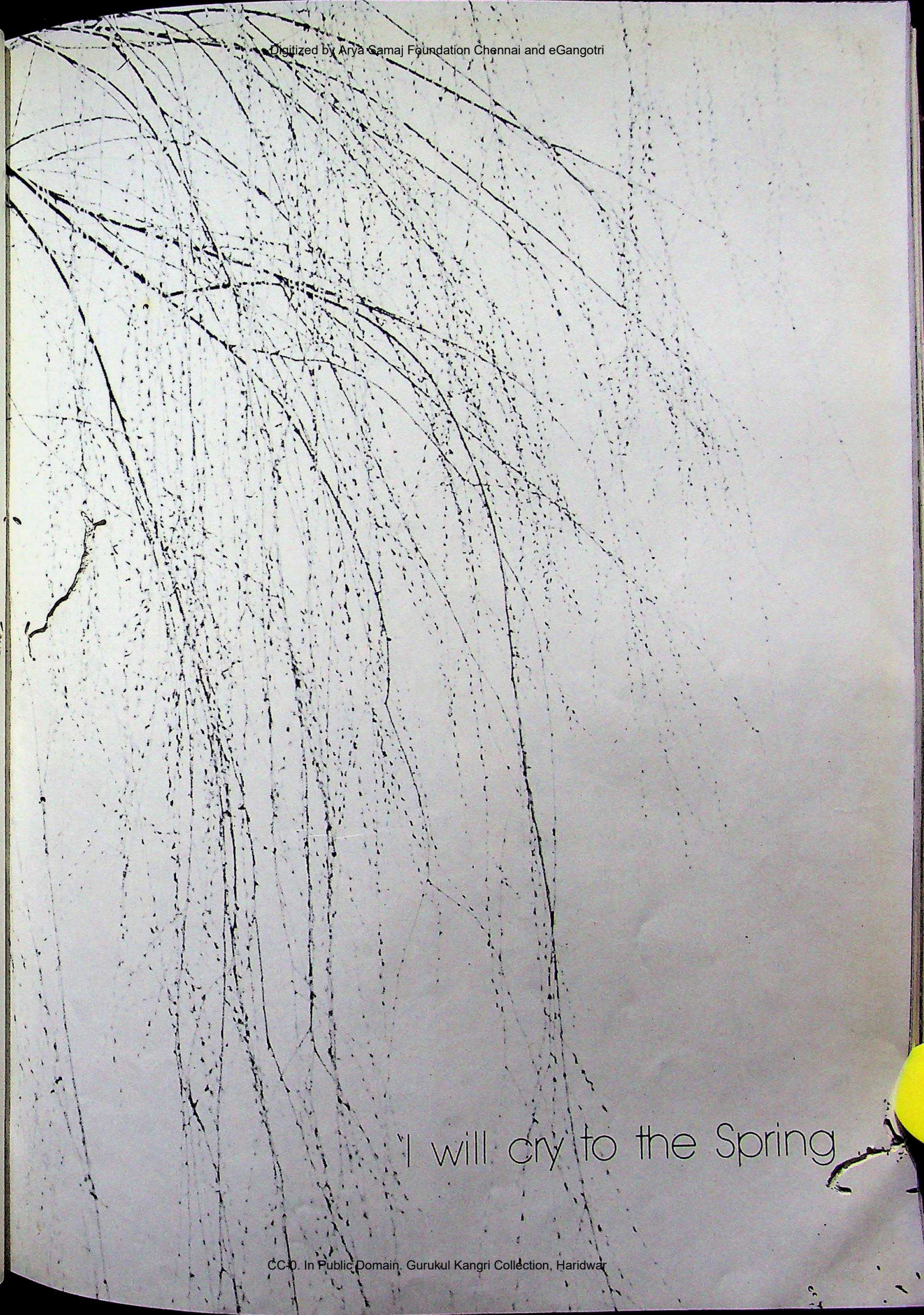

I will cry to the Spring

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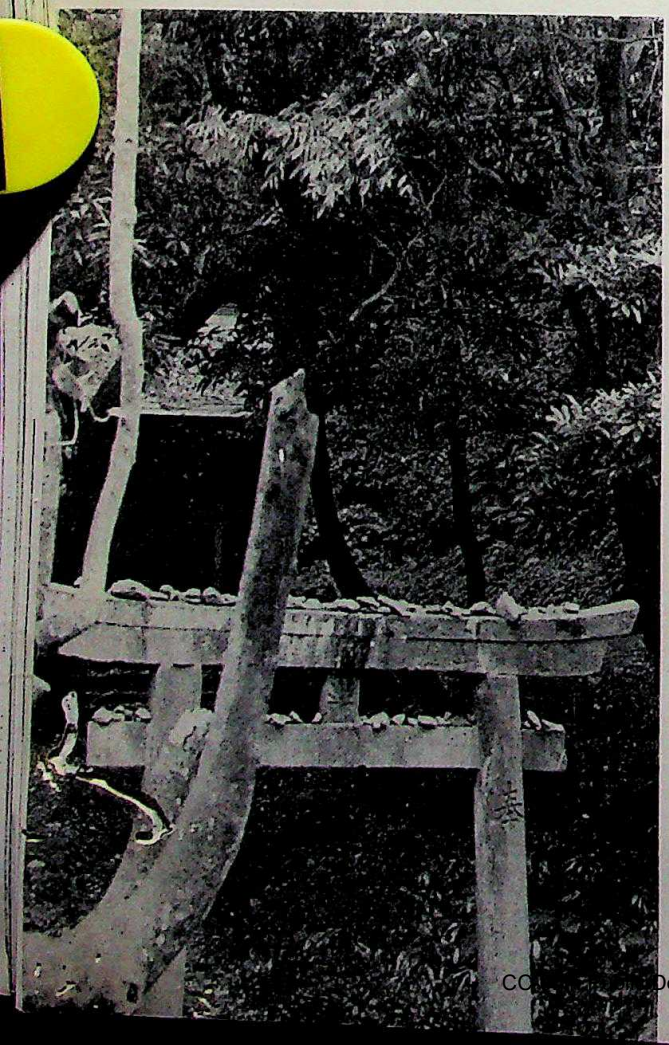
Photos by

Takao Yasuzawa



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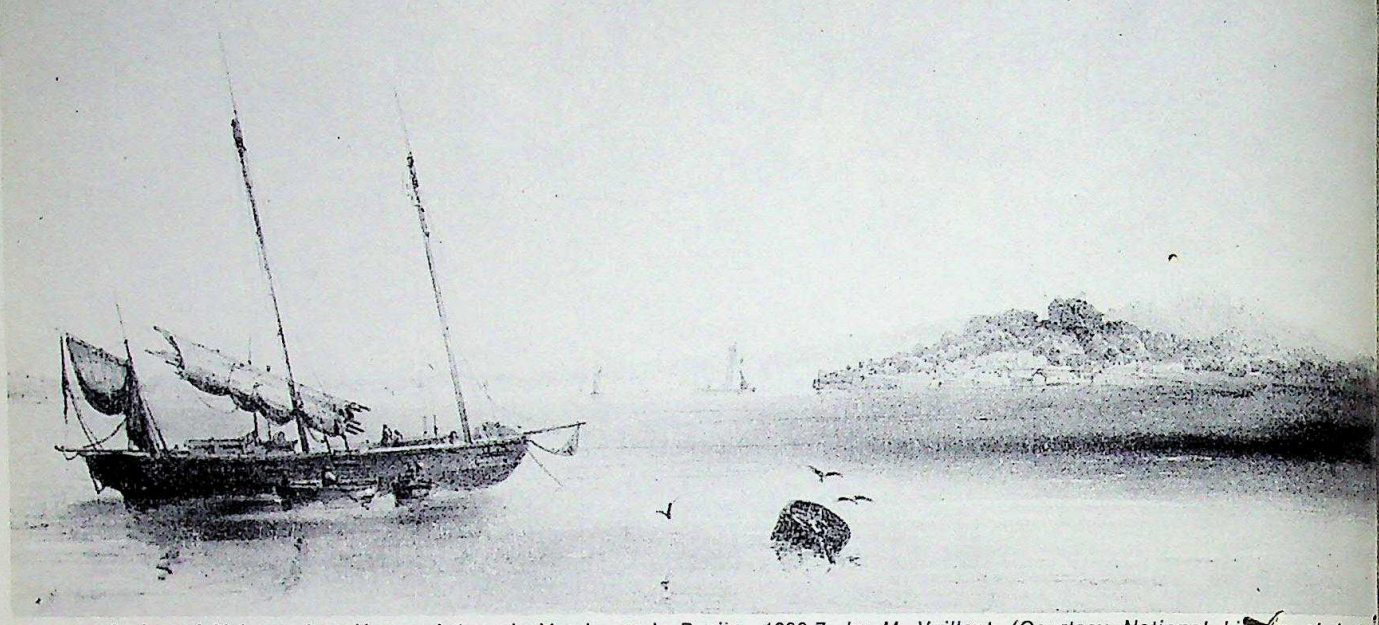

A view of Malacca, from Voyage Autour du Monde sur la Bonite, 1836-7, *by M. Vaillant. (Courtesy National Library of Australia)*

'THE BEST CHOSEN LANGUAGE' II

D. J. Prentice

In the first part of this two-part series, Dr Prentice spoke of the importance of Malay in its various forms as means of communication on mainland South-East Asia and in the island nations adjoining.

In the following pages, Dr Prentice, an expert in linguistics and a lexicographer, now at Leiden University The Netherlands after four years' work on the Malay Dictionary project at the Australian National University, spe of the increase in the use of Malay and Indonesian—languages identical with the exception of some words and usa and pronunciations (no longer in spelling)—and of the work being done in several areas, notably in Malaysia, t one might say—'catalogue' the language. This work is being done, in collaboration recently with Indonesia, to set a rationalised vocabulary for 'new' words, and to rationalise grammar and syntax.

As our contributor mentioned, there has been opposition to the language in some areas. In the East Malays States of Sarawak and Sabah, where the Malay population is proportionately much smaller than in Peninsula Malays English was adopted as the official language and principal medium of instruction in the post-war colonial per English was then generally accepted because it was seen as the key to educational advance. Under the Malay Agreement the two states were allowed to set their own pace in adapting to the national language. Malay was fin accepted as the official language in Sarawak in 1974. Sabah had taken the decision somewhat earlier.

The work done on the language in Malaysia at the Dewan Bahasa dan Pustaka is needed for a language t has become more important even than it was in the past, since the countries using it as their main medium of excha are now playing an important part in the politics of the area, and the work is needed on a language developing fast as Malay is. Besides, the advance in technology means that persons using Malay or *Bahasa Indonesia* need accepted term for a new invention, and the differences stemming from differing colonial occupations need ironing o one of them would be the use of the unusual-sounding word for 'receipt' in Indonesia, *kwitansi'*, which turns out to only one of many words taken over by the Dutch from the French (in this case, *quittance*'), given a Dutch spelling pronunciation, and, in this case, bequeathed to the Indonesians, who modified the spelling to suit themselves. (Anot is *losman,* or boarding-house from the French *logement,* meaning accommodation.

There is even the Portuguese influence remaining in both Malaysia and Indonesia. Some years ago, in a Natio Day speech, the late President Sukarno referred to an old Indonesian expression meaning 'co-operation', *goto royong,* and mentioned a saying that had grown up for people working in rhythm, as in hauling logs or on shi *Hop Lopis kuntul baris.* It turned out that the phrase referred to a saying used on a plantation owned by a Portugue called Lopez, locally pronounced *Lopis.* The President's 'find' was hardly a blow for nationalism through langua —Editor.

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BECAUSE in the colonial period the area in which it was spoken was artificially separated into two spheres of influence, the English and the Dutch (the line between them ran right through the Riau-Johore area, to which the court of Malacca had fled centuries earlier), and because the Europeans relegated Malay to an inferior position *vis-à-vis* Dutch and English, the growth of Malay was stunted. Cut off from developments in the industrial nations, the vocabulary of Malay failed to keep up with the advances in science and technology of the nineteenth and twentieth centuries. The position was aggravated in the British sphere by the supremacy of English as a world-language, which made it a much more formidable competitor than Dutch. Such an atmosphere of stagnation encouraged linguistic conservatism both among the Malay-speakers themselves and among their colonial rulers, so that, even when the language later began its effort to catch up with the times, its progress was hampered by people who saw new words and phrases only as 'corruptions'.

The early twentieth century nationalists in Indonesia were aware that Malay and not Javanese was the most suitable candidate for a national language for Indonesia, and declared it so under the newly-coined name of *Bahasa Indonesia* in 1928. As Malay had long been known and accepted in one form or another throughout Indonesia, it was not felt to be the exclusive property of any one ethnic group. Moreover, ethnic Malays formed less than 10 per cent of Indonesia,'s population, so members of other ethnic groups did not see the rise of Malay as the national language as constituting a 'take-over bid' by the Malays. It was in this way that Indonesia avoided most of the language-problems experienced by other newly-independent nations (including Malaysia). Linguistic factors also facilitated the early acceptance of Malay: it was not burdened by the necessity to use several radically different speech-styles and sets of vocabulary depending on the social relationship between speaker and hearer, as is the case with Javanese and Sundanese.

The proponents of *Bahasa Indonesia* (in the remainder of this article it is referred to as BI) in the 1920s were also aware that Malay had a lot of catching-up to do before it could cope adequately as a national language in the twentieth century. They therefore laid down principles and plans for enlargement of the vocabulary, production of textbooks, training of teachers, etc. Not very much was achieved, however, until the Japanese occupation. The new rulers immediately forbade the use of Dutch and English, intending that Japanese should become the language of government. Since this step obviously could not be implemented overnight, the Japanese encouraged the use of Malay for administrative purposes as a temporary expedient, by setting up committees to put into practice the principles laid down in the 1920s. Thus, for the first time in over four hundred years, Malay once again began to be used as a viable official language on the national level. Indeed, in Indonesia the use of Malay, like the wearing of the *pici* (or *songkok*), very rapidly became an expression of nationalist (that is, anti-Dutch and anti-Japanese) feeling. As a result, the Japanese never carried out their intention of imposing their own language for administrative use.

In Malaya, the Japanese occupation had a similarly catalytic effect on Malay, but, whereas in Indonesia its development as the national language continued without pause through the 1945-49 revolutionary period and beyond, in Malaya it reverted after the Japanese occupation to its pre-war status *vis-à-vis English.* This positon lasted until 1956, the year before independence, when the Malayan government set up the Dewan Bahasa dan Pustaka (Language and Literature Agency). The tasks that confronted the Dewan as far as language-reform was concerned were essentially the same as those which had confronted the Indonesians fourteen years before—namely, the provision of textbooks in the language (whether originals or translations) and restoration of the vocabulary. Yet until very recently there was little consultation between the two governments on language problems. The government of Malaya, and later of Malaysia, made no serious attempts to profit by Indonesian experience or to co-operate with Indonesia in, for example, the standardisation of technical terms.

The reasons for this lack of contact are numerous. In the first place, during the separation of the two countries in the colonial period, the consciousness of a common heritage shared with Indonesia had been largely suppressed, and Indonesia had come to be regarded as simply another foreign country. The fact that the same language was used in both countries had curiosity value and little else. Among the ruling *élite* at least, contacts with distant Britain were stronger and more numerous than those with nearby Indonesia. The same was true, of course, of the contacts between Indonesia and the Netherlands. Secondly, linguistic prejudice also played its part: the Indonesians tended to regard *Bahasa Malaysia* (referred to hereafter as BM) as quaint, countrified and cumbersome, while the linguistic purists who were in charge of Malaya's language-policy regarded BI as a corrupt mixture of Javanese and Malay. This prejudice led in many instances to the rejection of an otherwise suitable coinage for a technical term simply on the grounds that it had been coined in Indonesia and/or was in use there. Thirdly, there were practical difficulties, in that each country had a different European language as its point of reference for the translation of new technical terms. Effective participation in a joint policy in this area would have required numbers of educated Malay-speakers who also knew both English and Dutch. In Malaya, at least, there were very few people with these qualifications. Finally, of course, Sukarno's policy of *Konfrontasi* during and after the formation of Malaysia put an end to many hopes for co-operation for some years.

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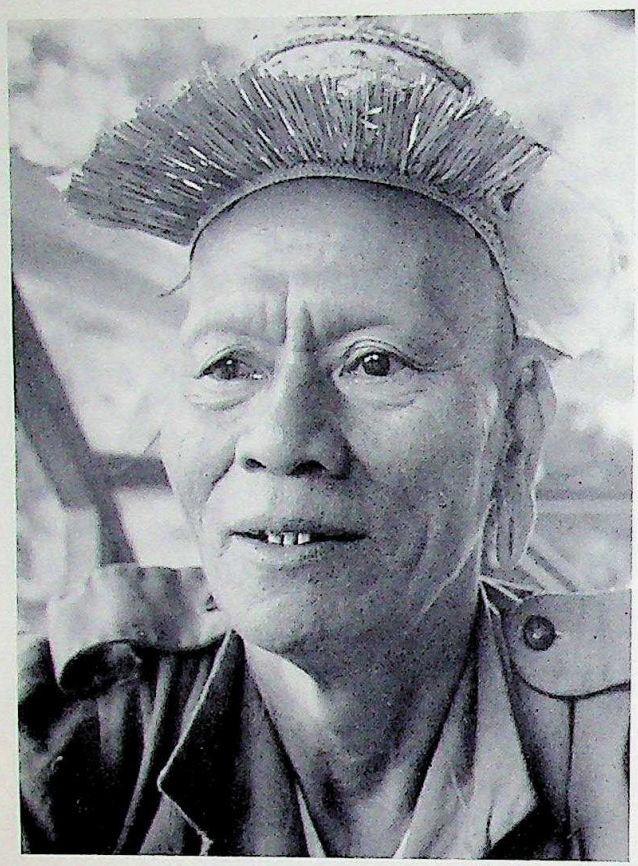
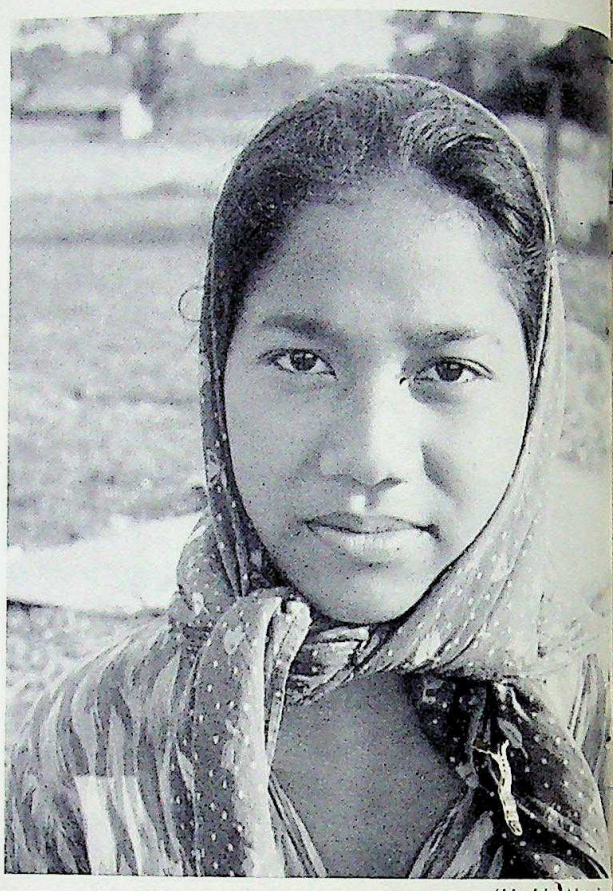


(Hedda Morrison)

This photograph of a Kelabit headman in Sarawak was taken in the 'fifties.



(Hedda Morriso

A Malay country girl photographed in Kelantan.

In short, Malaysia and Indonesia for many years went their separate ways. In the late 1960s, even Brunei set up its own Dewan Bahasa, modelled on that in Kuala Lumpur. Not only did each country coin its own technical terms, but each adopted a widely differing approach to the problem, although certain techniques were employed by both. For instance, both BI and BM used 'calques' or loan-translations. That is, they translated the component parts of a foreign word or phrase, rather than adopting it unchanged (for example, BI *pohon jarum* 'conifer', a translation of Dutch *naaldboom,* literally 'needle-tree'; or BM *papan hitam,* a translation of English *blackboard*). Generally speaking, however, BI tended to adopt international terminologies based on Latin and Greek, whereas BM, under the guidance of the Dewan's first director, Syed Nasir, was more conservative and would accept foreign words only as a last resort. The various committees charged by the Dewan with the task of creating new technical terms were instructed to use Malay words as much as possible. This was done in a number of ways (of which only the second was used to any extent in Indonesia):

(a) By giving a new meaning to an already existing Malay word. Thus the dialect word *cerakin* meaning 'medicine-chest with many small compartments for separate medicaments' was used to form the verb *-cerakinkan* 'to analyse' and the noun *cerakinan* 'analysis' (that is, 'separating things into their own compartments'; compare BI *analisa*);

(b) By creating a new phrase or compound-word—for example, *kajimanusia* 'anthropology' (from *-kaji* 'to study' and *manusia* 'human being'; compare BI *anthropology*); *jangka tekanan udara* 'barometer' (from *-jangka* 'to measure, estimate', *tekanan* 'pressure' and *udara* 'air'; compare BI *baromètre*); and *tindakbalas* 'reaction' (from *-tindak* 'to move, take action' and *-balas* 'to repay, retaliate'; compare BI *réaksi*);

(c) By creating a portmanteau-word—that is, by combining parts of two or more words—for example, *magi* 'carnivorous' (from *-MAkan* 'to eat' and *daGING* 'meat'; compare BI *karnivor*); *jurutera* 'engineer' (from *JURU* 'craftsman, expert' and *jenTERA 'engine'*; compare *insinyur* from the Dutch *ingenieur*).

Even when the Dewan used an English word, it generally borrowed the spoken form rather than the written form (thus *sepiar, sekil, sabersip, talivisyen,* from English *sphere, scale, subversive, television;* compare BI *sfér skala, subversif, télévisi*). All of these techniques had the effect of making the BM term quite different not only from the BI term but also from the international term accepted in most other languages. They also made

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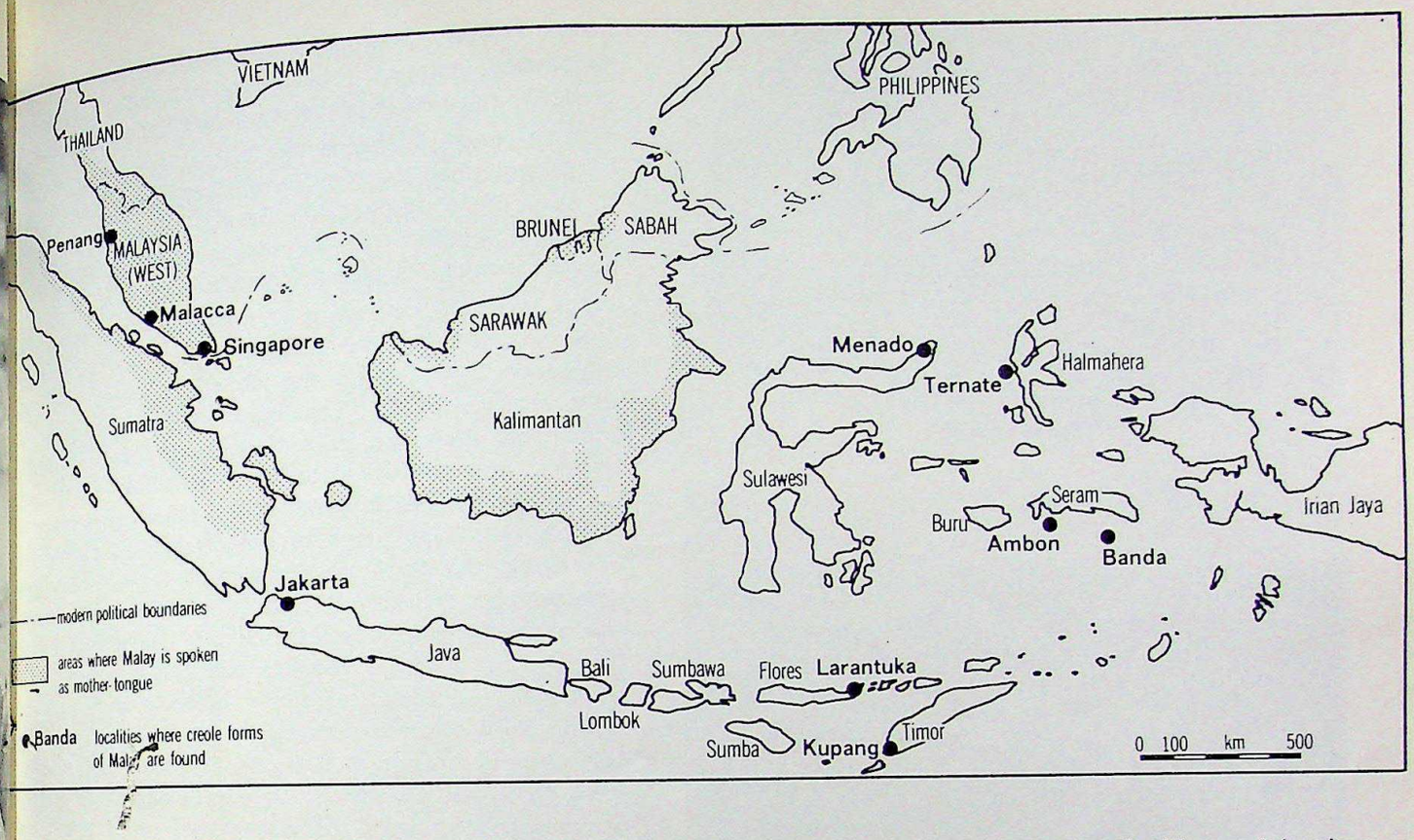

Dewan's task more difficult, since instead of merely adapting the international term to the BM spelling system in accordance with certain well-defined rules (for example, replacing the letter 'c' by 'k' or 's', and the endings *-ist, -ism, -ation* by *-is, -isma, -asi*, etc.), it was necessary to have each new word considered individually by a panel of experts in the field concerned. The fact that experts in linguistics were rarely consulted (in either country) often led to inconsistencies. Thus the Dewan's committee on biology, forestry and agriculture translated the term 'tuberculin-tested milk' as *susu tiiada tibi* (that is, 'milk free of tuberculosis'), but gave no indication as to how to translate 'this milk has been tuberculin-tested by the health department' or 'tuberculin-testing is universal in this country'. Moreover, different committees sometimes translated the same term in different ways. For example, the Dewan's committee on engineering terminology translated 'atmosphere' as *udarakasa* (a portmanteau word made up of *UDARA* 'air' and *angKASA* 'space') the geography committee chose *udara* and *lapisan udara* (literally 'air-stratum'), while the physics committee plumped for *udara, angkasa* and *udarakasa*. Nor did any of the committees indicate which, if any, of these coinages was to be used with the sense of 'unit of pressure', commonly employed in physics.

In a booklet published in 1967, the Dewan made the proud claim that it had established over seventy-seven thousand technical terms in the decade since 1956. It is rather difficult to evaluate the significance of such claims because, first, there are many duplications of the type exemplified above; secondly, many items, such as the previously-mentioned word *maging* 'carnivorous' and its even more dubious companion *maun* 'herbivorous' (made up of *-MAkan* 'to eat' and *daUN* 'leaf'), have never been widely accepted; and, thirdly, some items, such as

(Hedda Morrison)

A Balinese girl.

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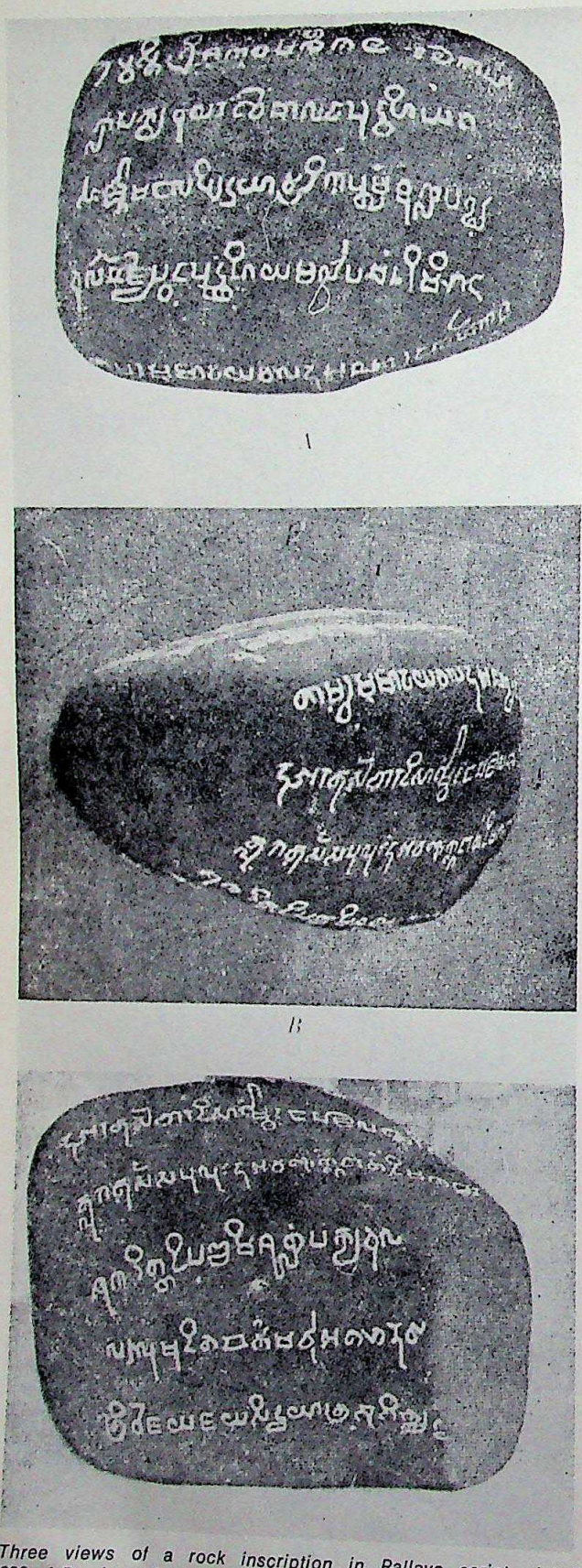

Three views of a rock inscription in Pallava script, dated 683 A.D., issued by the king of Sriwijaya (South Sumatra). The inscription, which was found at a place called Kedukan Bukit in the town of Palembang, mentions military activities against a neighbouring kingdom by the Sriwijayan army.

riwayat hidup 'biography' and *jangka tekanan* ud
'barometer', enjoyed a temporary popularity only to
gradually rejected in favour of *biografi* and *barométer*

Much more valuable is the impressive number of te
books published by the Dewan, especially since 19
It is in this field that the Dewan can make its m
important contribution to language development,
actually putting its terminologies to use.

The work of the Dewan is not confined, however,
the kinds of tasks that modern linguists call 'langua
engineering'; it also has the job of encouraging acce
ance and use of BM. Because of the massive influx
immigrants from China and India in the ninetee
century, whose descendants now constitute almost h
the population, and because of the former supremacy
English as the language of government, education a
commerce, the linguistic situation in Malaysia is qu
different from that in Indonesia. In West Malaysia at lea
where the Malays constitute the only indigenous ethn
group of any size, the Malay language *is* regarded as t
language of a particular ethnic group, and many no
Malays do feel disadvantaged by its acceptance as t
sole official language of Malaysia. The Malaysian gover
ment, therefore, still has to cope with opposition to B
whereas in Indonesia the acceptance of BI has be
universal and unquestioned. In its efforts to further t
use of BM, the government has to tread warily the narr
path between encouragement and force. Moreover,
campaign must be directed as much towards Malays
non-Malays, since the former tend to assume that th
need make no special effort to keep up with the develo
ment of BM. The situation may easily arise in which t
majority of Malaysians who have a good workin
knowledge of standard BM will in fact be non-nativ
speakers of Malay, who have learnt the language
classroom conditions.

It is probably true to say that the gap between BM a
BI widened more rapidly during the first twenty yea
after the second world war than at any other tim
Fortunately, there are signs that this process is slowi
down. The most obvious (but also linguistically the les
significant) difference between BM and BI, namely t
difference in the spelling-systems, has recently be
removed by the implementation in both countries of
common orthography. Spurred on by the outstandi
success of this exercise in co-operation, and aided b
the emergence of more enlightened and internationall
minded policies at the Dewan, the Malaysian and Indo
nesian governments are now endeavouring to elimina
the confusion caused by the differing scientific term
ologies. The implementation of the joint spelling h
probably made this task even more urgent, as wor
written in one country will now be more easily and mo
widely read in the other.

Outside the realm of the national language, it can b
expected that Bazaar Malay will gradually disappear:
increasing numbers of people are educated to be litera

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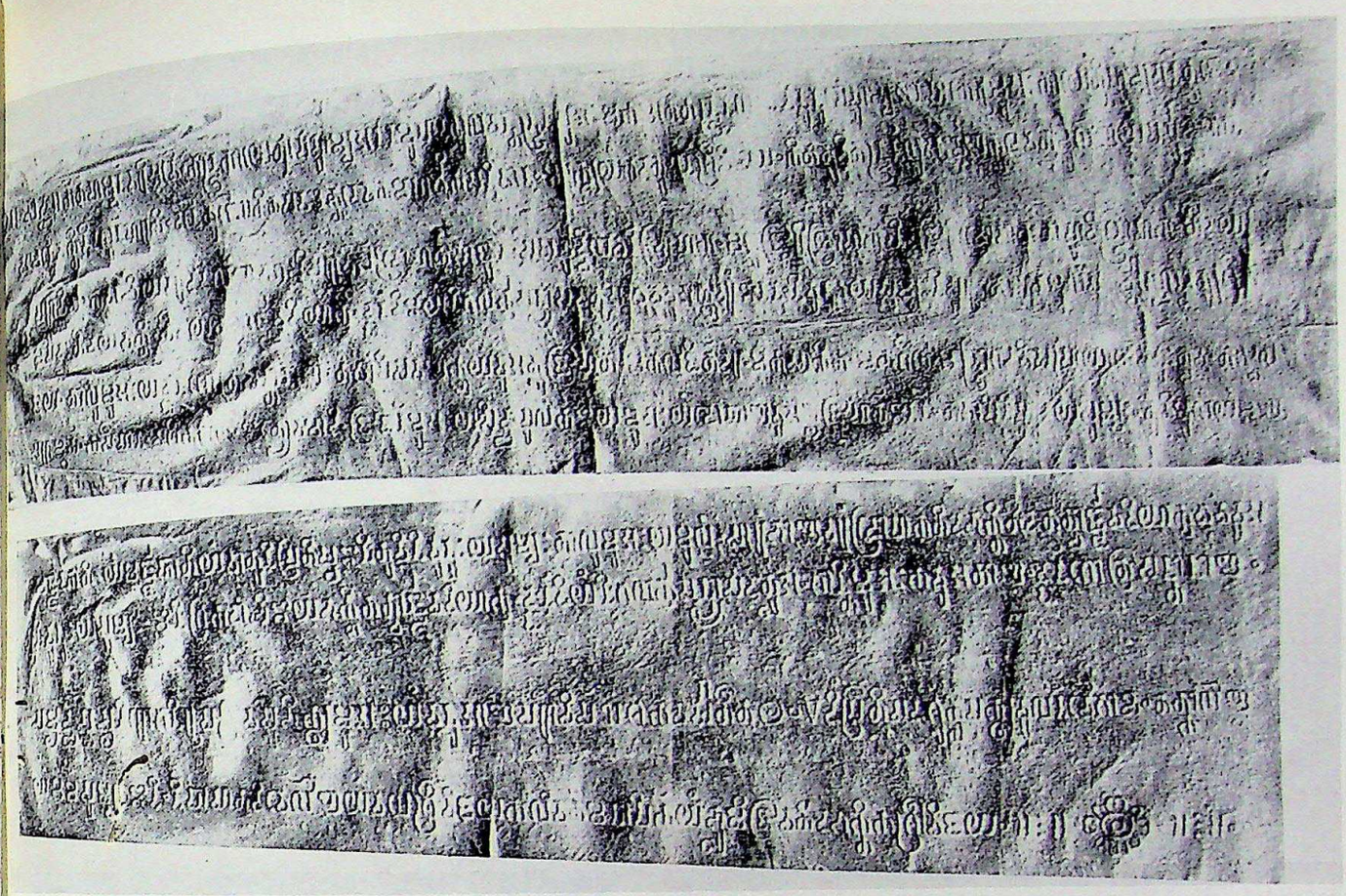
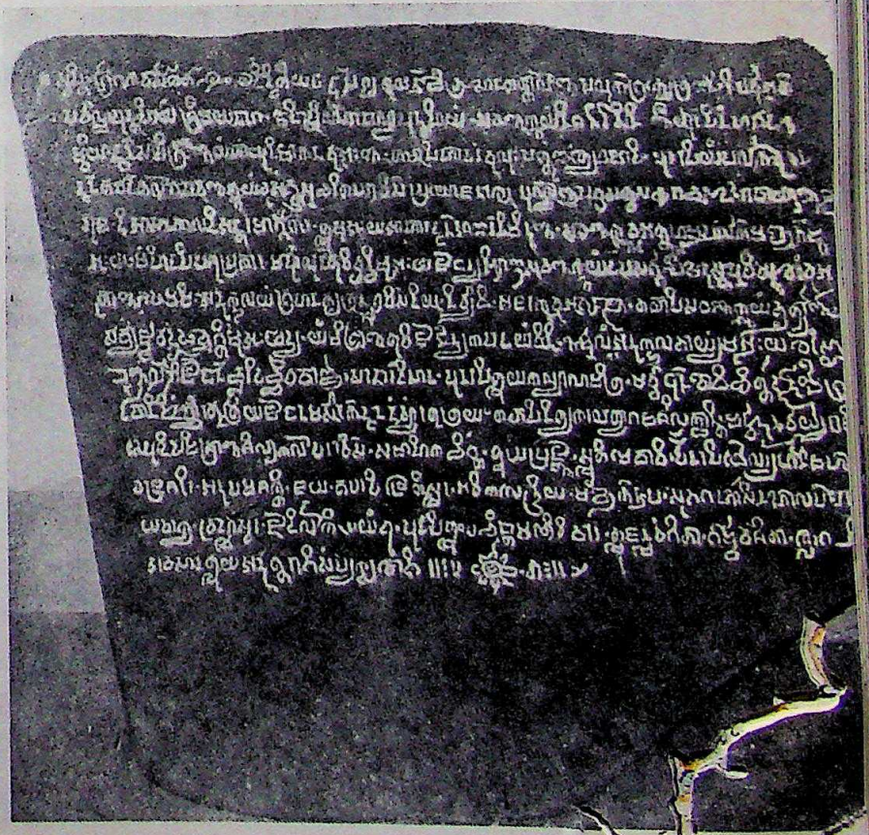


Inscriptions in Pallava script issued in the seventh century A.D. by the king of Sriwijaya. (Photographs of inscriptions are by courtesy of the School of Oriental and African Studies, University of London.)

in the national language, the latter will increasingly take over the *rôle* of *lingua franca* between persons of different linguistic backgrounds. A similar fate probably awaits the rural dialects and the various Malay-based creoles, which are coming under increasing pressure towards assimilation with the standard language. As far as the standard language itself is concerned, the present trend certainly seems to be for BI and BM to grow closer together, although many differences in pronunciation and vocabulary will, of course, remain. Yet, if the Malaysian government succeeds in its aim of having every citizen speak BM as either a first or a second language, could the existence of such a large proportion of non-native-speakers fail to have the same innovative effect on BM that the Javanese-speakers have had on BI? In such a situation, which trend would prevail—diversification or unification?

The Malay language as a whole is currently undergoing a period of change at a speed experienced by few other languages in history. This change is so rapid that the language will unquestionably have altered more in the sixty years between 1940 and 2000 than it did in the five hundred before 1940.

Whatever the outcome of these developments, it is certain that Malay has emerged from its centuries of suspended animation to become (as the first or second language of over a hundred and forty million people) the sixth most important language of the world.



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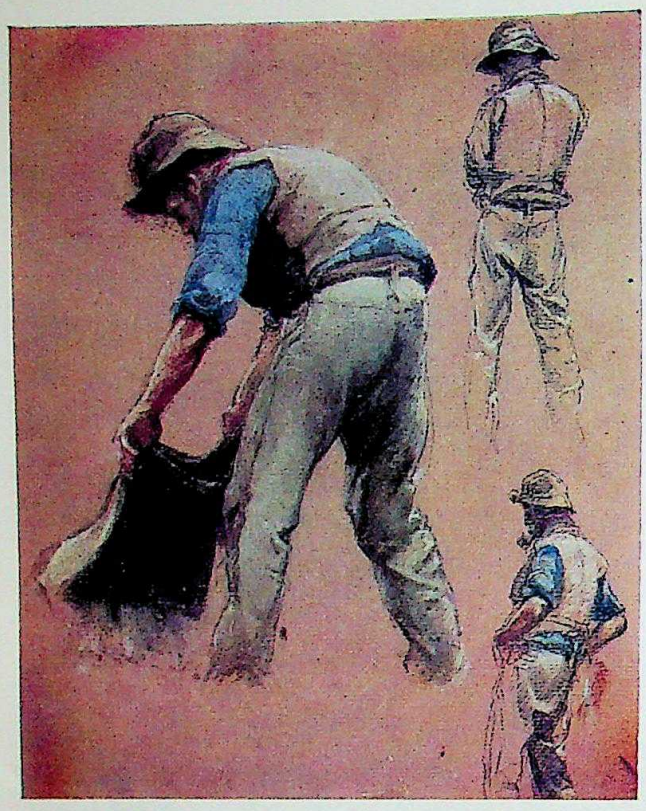

WITH A HUMBLE MIND

Jean Campbe

Grateful acknowledgement is made to the Director and staff of the Art Gallery of South Australia, to the son of the artist Mr David Heysen, to Doug McNaughton of the Australian Information Service, who photographed many of the works and to their owners, who kindly gave permission for the reproduction in Hemisphere.

Left: The Potato Picker, *about 1907; below:* Approaching Storm with Bushfire Haze *(ca. 1913).*

EVEN TOD
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EVEN TODAY, the vast majority of people see Australia as Sir Hans Heysen, O.B.E., painted it. In the first half of the twentieth century, his vision of the Australian landscape imposed itself on popular taste more widely and deeply than even the blue and gold impressionism of Sir Arthur Streeton. Nothing else is more evocative of Australia to the native born or so strikes the visitor by its unusual form and colour as the ubiquitous gum tree — the eucalypt. And Heysen made the gum tree his own.

Heysen had so many imitators all over Australia that the noted critic Professor Bernard Smith described him as 'a giant among the scrub of little gum tree painters'. His work is in all major Australian collections, public and private. Originals are still eagerly sought and a mutliplicity of reproductions has appeared. He became South Australia's best-known artist, and last October, two special exhibitions, one a retrospective of his work and the other historical, were mounted by the Art Gallery of South Australia to celebrate the centenary of his birth, afterwards to appear in the State galleries in New South Wales and Victoria.

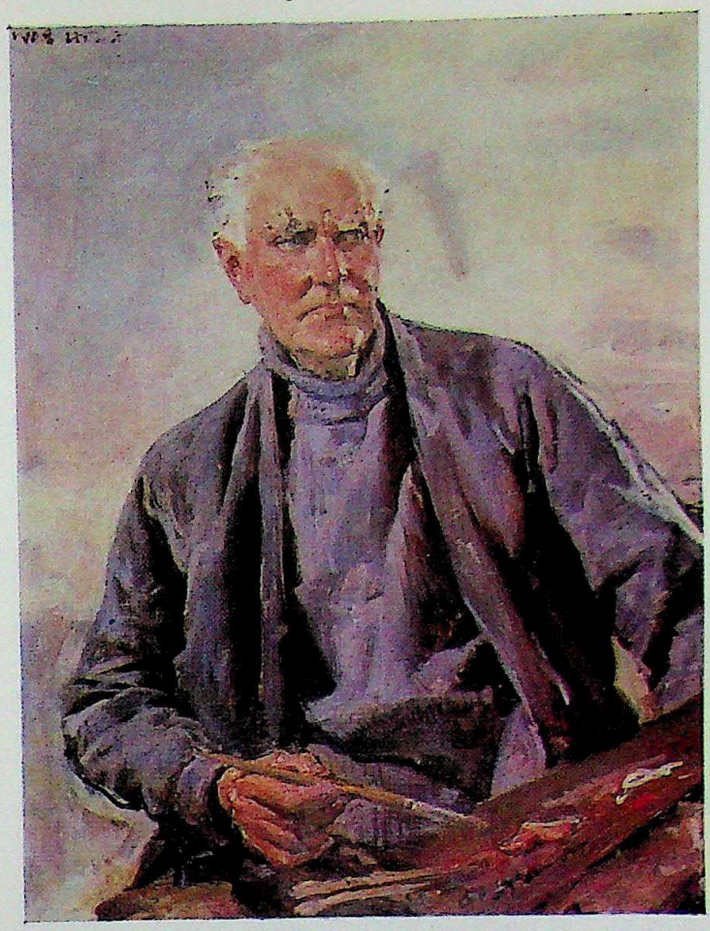
Hans Heysen's life line was straight, long and simple — almost uneventful. A single-minded man with a devoted and understanding wife and family, he pursued painting without deviation or interruption. Early striving and study led him to steadily gained and quietly accepted success, honours and fame that sat lightly on him and disturbed scarcely at all his peaceful country life, painting at Hahndorf in the Adelaide hills.

Hans Heysen was born in Hamburg, Germany, in October 1877, the third surviving son and second youngest child of Louis and Elize Heysen, who migrated to South Australia when Hans was six years old. The family had a struggle to survive in their first years in Adelaide, but Louis Heysen eventually established himself as a hawker of eggs and farm produce. The family settled at Norwood, then one of the outer suburbs.

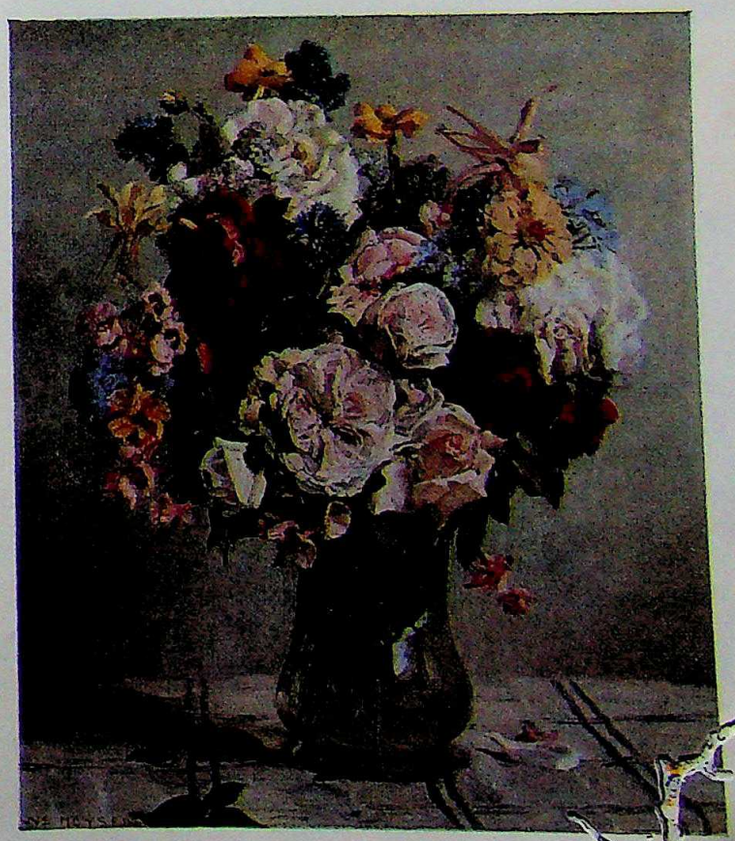
Hans received comparatively little schooling and had to overcome an initial language problem. His mother, to whom he was deeply attached, lived to be ninety-six yet never learnt to speak English, so Hans grew up bilingual. By the time he was fifteen he was working at a timber mill operating on a six-day week, starting each day at 7.30 a.m. and ending at 6 p.m. For his labours he received five shillings weekly. Wednesday afternoons, however, were his own.

From an early age, Hans drew and painted in any spare time he had and with any materials that came to hand. It became obvious to the family that he had a natural ability to draw, and they decided that on Wednesday afternoons he would attend James Ashton's School of Art at Norwood.

Yorkshire-trained James Ashton, who taught and encouraged many of South Australia's embryo artists, including his own son Will (later Sir Will), Hayley Lever,



Portrait of Sir Hans Heysen, by Ivor Hele (1959) and Cottage Bunch *(1937).*



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and Ivor Hele, was a fluent water-colourist; he recognised Hans' talent in the medium and set him to copy the British watercolourists. Later, Hans, who by this time was doing the rounds on his father's produce cart and had a little more spare time, painted at Ashton's Academy in Adelaide and attended the School of Design under Happy P. Gill, where the solid foundation of his draughtsmanship was begun, and where Archibald Collins inculcated in him an impressionist's reverence for light in landscape and luminosity in paint. Fellow pupils and painting companions were Gus Barnes, later director of the Art Gallery of South Australia; Hayley Lever, who found recognition in America; and Reg Comley, his frequent companion on Sunday painting excursions in the hills.

As a boy on holiday, Hans had already fallen in love with rural life at Hahndorf, a charming, sleepy little German village set among gentle hills and great gum trees.

From 1896 to 1898 Hans was exhibiting regularly with the South Australian Society of Artists and the Adelaide Easel Club, his work receiving high praise from local critics. Some of his pictures were sold for a guinea or two from the walls of the barber's shop of his future brother-in-law, and it was one of the barber's clients, William Davidson, an early patron who had paid twenty guineas for a large oil, who brought about the turning point in Heysen's life.

Some months' full-time painting around Mount Barker was afforded Heysen in 1898, when a second-hand dealer and auctioneer offered him two pounds fifteen shillings for a week's work; for this sum, Hans undertook to supply weekly six water-colours or three oils. He felt this period of complete absorption in nature and his art was of inestimable value in the strengthening and development of his painting.

As a member of the Easel Club, Heysen was selected for representation in the Australian Exhibition in London in 1898; he was praised, and one of his water-colours was sold. In 1899, when James Ashton submitted some of his students' work to the Royal Drawing Society of Great Britain, Hans Heysen was awarded first prize and a gold medal for the outstanding work of the year — a landscape in water-colours.

This overseas success made Heysen the most talked-about young artist in Adelaide, and William Davidson was inspired to approach him with a proposition. With three other gentlemen, he drew up an agreement providing Hans with four hundred pounds for overseas study; in return, they were to get the pictures he produced. Hans, who had been vainly trying to save towards study in France, accepted with alacrity.

The rather shy young student, plunged alone into the life of Paris in 1899, was not at first very happy. Not even the Louvre, nor the vaunted exhibitions, such as the Salon, came up to expectation — he found the school paintings dark, the more modern ones 'gaudy'.

From his small, furnished room on the fifth floor of a hotel in the Rue de Raspail he wrote back to Archibald Collins, the much admired teacher in Adelaide who had introduced him to the luminosity of Impressionism:

> I have begun my studies at Julian's Art School in the Latin Quarter and have booked for six months as an all day student. At present the studios are very crowded there being many Americans studying to drawing for black and white illustraters (sic), take the work on average it is very strong in drawing and modeling but in colour very black, just as you said I should find it, they seem to get no life in it, especially in the shadows which look so very dead, there are few exceptions. In our studio we have Laurens and Constant to criticise our work twice a week, the criticism is very short and straight to the point . . . I found I was a long way behind so mean to work hard and do nothing else but draw in charcoal in the school for at least six months. I have done a little sketching outside already, but it is becoming very cold . . . In summer I mean to have three months in the country.

Though he found the scenery in and around Paris 'immense', everything seemed 'so different from Australia'. He was glad to get out of Paris, found the more serious and purposeful life of London to his taste, and wore out a pair of shoes exploring the galleries. Velasquez, Van Dyck, Franz Hals, Sargent and Orchardson were the old painters who made most impact on him at this time: all were brilliant technicians, sure, dashing, and exultant in the power of the brush. Here too, the English water-colourists, Cox, Cotman and de Wint, cast a spell on him. His life-long admiration of Constable, with whom he felt an ever-increasing affinity, also began. It could have been Heysen who said: 'The landscape painter must walk in the fields with a humble mind. No arrogant man was ever permitted to see nature in all her beauty'. Indeed throughout his life he frequently expressed similar sentiments, which lie at the basis of his artistic credo.

Painting in Holland, Hans loved the intimacy of the landscape, the simplicity of life on the land, and the work of the artist of the then-modern Dutch School with their 'truth to nature and solid technique'. Already the young artist was setting his feet on the path he was to follow. From the little village of Laren, about thirty kilometres from Amsterdam, 'a very interesting place full of subjects for the brush', he wrote:

> Jacob Maris is my favourite and his work has impressed me most of any landscape painter I have seen. His work though almost devoid of colour is full of atmosphere and light — work like this seems to grow on one — very strong yet full of sentiment and expression — it goes to show there is something else besides colour one has to work for — this I find the chief fault with modern French art — all colour, no atmosphere . . . In another week or so we shall be on our way back to put in another 6 or 8 months grind at drawing — sorry to say I haven't the greatest desire for Paris, the living part of it.

Among the Frenchmen it was Corot, Millet and the members of the Barbizon School who left a permanent impress on his work. Living frugally and industriously, Hans eked out his allowance, keeping a most minute account

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of expenditure. He was able to spend his fourth year in Italy, and fell in love especially with Venice: 'Venice is a dream. It is too beautiful — all and more than I ever imagined . . . Sometimes it looks as if the whole city hovers between water and air.' Florence, Siena, Assisi, Rome, Naples, Capri, much of the journey on foot and always sketching assiduously, and Heysen's four-year apprenticeship was at an end.

He returned to Adelaide in 1903 and set about making a livelihood by teaching and painting. His first one-man exhibition in Adelaide, though received with much acclaim, barely covered expenses. But 1904 proved a most successful and eventful year. He sent a group of paintings to the twenty-fifth annual exhibition of the Royal Art Society of New South Wales, and one of the big oils, 'Coming Home' was bought by that State's National Gallery for a hundred and fifty guineas; the other, 'Mystic Morn' was awarded the Wynne Prize for Landscape by the Trustees of the New South Wales Gallery and was purchased later by the Art Gallery of South Australia for a similar price.

On the strength of this financial success, Hans married Sallie Bartels, one of his students. A lively, sensitive and intelligent girl, she was a fervent admirer of his painting and proved the most loyal helpmate an artist could desire. Heysen was awarded the Wynne prize again in 1909, this time for a water-colour, 'Summer'. He went on to win this prestige-giving prize nine times in all — five times for water-colours.

The young couple soon settled at Hahndorf, and the name Heysen is as inextricably linked with Hahndorf as is Millet with Barbizon, Palmer with Shoreham, Constable with Dedham. Each artist dwelt in his chosen territory, loved it, painted it, and found in it fundamental truth on which to base his art. In 1912 a very successful exhibition enabled Heysen to acquire a beautifully wooded property between Hahndorf and Ambleside, with a rambling, spacious home, 'The Cedars'. He built his studio among magnificent trees on the hillside near the house, and painted there till his death at the age of ninety.

In 1918, when *Art in Australia* devoted a number to a survey of twenty-five years of Australian art, Lionel (later, Sir Lionel) Lindsay ,a percipient writer on water-colour, declared:

> In Hans Heysen Australia possesses one of the greatest living watercolourists. He has a perfect technique; the relations he preserves between colour and paper are never strained, and with a simple and austere palette he achieves the most astonishing effects of light and atmosphere . . . His mental sympathies are with the Barbizon painters — with the life of the farm, the movement of flocks and herds and all that labour under the sky. Heysen has created the characteristic Australian landscape upon the edge of settlement; but above everything else he is the painter of the big gums, — he might have created them, so surely does he raise their majestic forms with his brush.

Gums in Moonlight, *charcoal, (ca. 1915-20) and a photograph of Sir Hans and Lady Heysen.*

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Heysen's art is forever deeply identified with the gum tree, which he never wearied of observing, drawing, painting. But in fact his range of subject matter was much wider than that, taking in pastoral landscapes, the beasts and men who work the land; still life and flower-pieces; the River Murray and its cliffs; and the Flinders Ranges. It was Heysen, who, artistically, first penetrated the ranges and desert country towards the Centre and set down the raw, red grandeur of inland Australia.

He responded to this strange, untamed terrain as intensely and with as much humility as he had previously brought to the gum tree and the cultivated countryside of the Adelaide Hills, with constant study and drawing to search out its form and character. In 1932, when he had already made several painting forays into this area, Heysen wrote:

> The far northern area interior of Australia with its stern reality of desert country holds a peculiar fascination for many who have come under its spell, and I must confess to have fallen a victim . . . I have seen it on calm days of crystalline purity when the eye could travel, as it were, to the end of the world, bringing with it that wonderful sense of infinity that a land of moist atmosphere could never give. There is an undeniable call about interior which covers by far the greater portion of Australia and offers, for the artist, a wide field yet practically untouched.

The fascination of this arid Australia was to be the inspiration of future generations of Australian artists, including Murch, Drysdale, Nolan, Annois, Daws, Hick and many others. On camping trips in the Flinders that significantly widened his understanding of Australian landscape, Hans was accompanied by his eldest son, David, who undertook all the chores of camp life; he cooked and cared for his father, allowing him full freedom to make the most of the daylight hours, and provided companionship in the wilderness. After his mother's death, David, with his wife, Lyly, again came to the support of his father and has since devoted himself to the proper care, understanding of his father's work and reputation, in exhibitions, monitoring reproductions, books, in compiling a *catalogue raisonnée.*

The latest, and one expects, the most important Heysen book is published by Rigby with the co-operation of David Heysen and with an introduction by Colin Thiele, author of 'Heysen of Hahndorf', to coincide with the one-hundredth birthday anniversary exhibition. From the beginning and throughout his long life, watercolour was more important in Heysen's output than oil, although of course his large oil paintings present his chosen subject matter with consummate skill and fidelity.

All his work was based on his sensitive draughtsmanship and observation of nature; his use of pencil and charcoal as a landscape draughtsman has never been equalled in Australia and rarely anywhere else. In watercolour his washes were usually translucent, high-keyed in colour, conveying suffusion of light — the high, golden light. But he also handled pearly effects of morning and the bony structure of ranges, influenced in this area of his work to good effect by Alexandr Iacovleff, who exhibited in Sydney in 1928. A splend Iacovleff mountainscape — remarkable for its éla simplicity of statement and sensitive control — hung Heysen's studio.

Writing of Heysen in 1929, Basil Burdett made th point that his approach to Australian landscape wa based on general academic principles and he differe from the Impressionists in that he attacked his subje from the angle of the draughtsman, relying on his intima rendering of mood and light to overcome the literalnes of studied observation. Heysen himself made his attitud clear in his notes to the special Heysen number o *Art in Australia* of June, 1932. He wrote:

> The Art of the painter is that relating to the eye and so it must be based on concrete forms as the ey sees them. I do not think it is in the painter's spher to try and represent abstract thoughts by pigmen on canvas . . . Truth to life and Nature must alway remain the keystone to every new effort . . . If Nature is no longer acknowledged as master and guide, th painter is content to repeat what he knows. He ma gain extra fluency in the manipulation of his materials and by repetition, but only at the expense of an further real progress, for he ceases to experiment and be his own severe critic. It is idle to close our eyes to the work of the Moderns. In time Masters wi emerge from the great mass of Modernism as in th past, but time alone will sift the great from th mediocre . . . There is a common link which bind their work with the old; that of significant design an the vitality of life . . . When speaking of design, I d not mean pattern-making which is purely to satisf the eye in mass and colour, and merely decorates space. The art of pattern-making is often confuse with that of design, and in relation to the latter i given too much importance . . . By design I mea the spacing of masses in your picture which are t interpret your message or object with most conviction satisfying the eye with their shapes and the mind wit their volume.

Throughout his life, Heysen retained his firm view on visual art as an activity governed by and wit the appeal to the eye, dependent on skilled and exper enced craftsmanship, and these were the standards tha governed his vote in his long membership of the A Gallery Board of South Australia. Beyond that, h accepted developments and experiments with tolerance and had always a sympathetic eye for the aspiring young artist. His views are stated forthrightly in the voluminou correspondence he maintained with Lionel Lindsay an Sydney Ure Smith, now in the collections of the Mitche Library in Sydney and the Australian National Librar and the evidence that he practised what he preached is to be seen in all his work and in the thousands o unfinished drawings and sketches which at his death h bequeathed to the Art Gallery of South Australia.

My own first meeting with Hans Heysen was when was very young on one of his infrequent visits to Sydney It was very brief, but he was not a personality easil forgotten. In his knickerbockers, polo-neck jumper, twee coat, felt hat, he could have been taken for a country

Red Gums of

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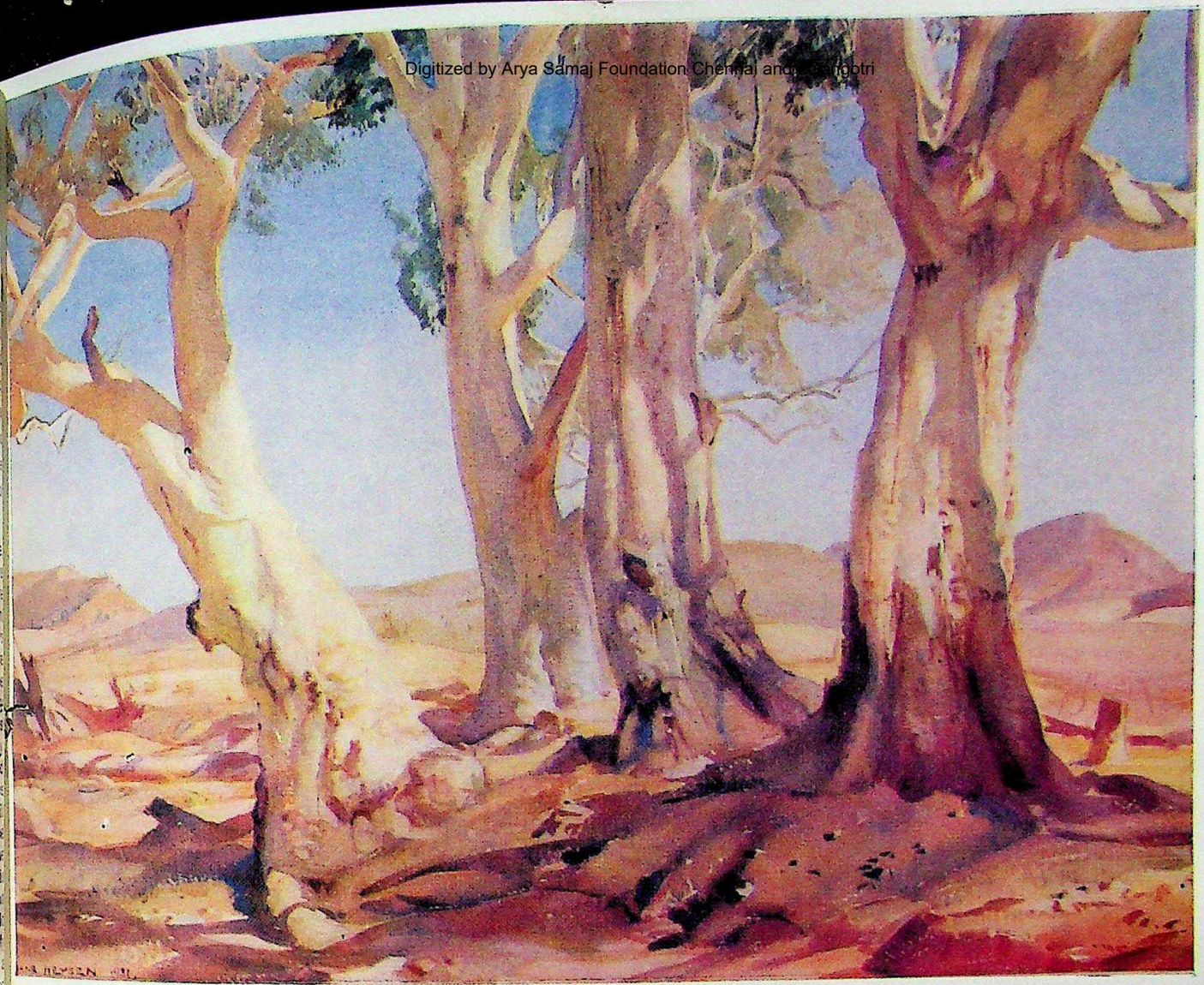
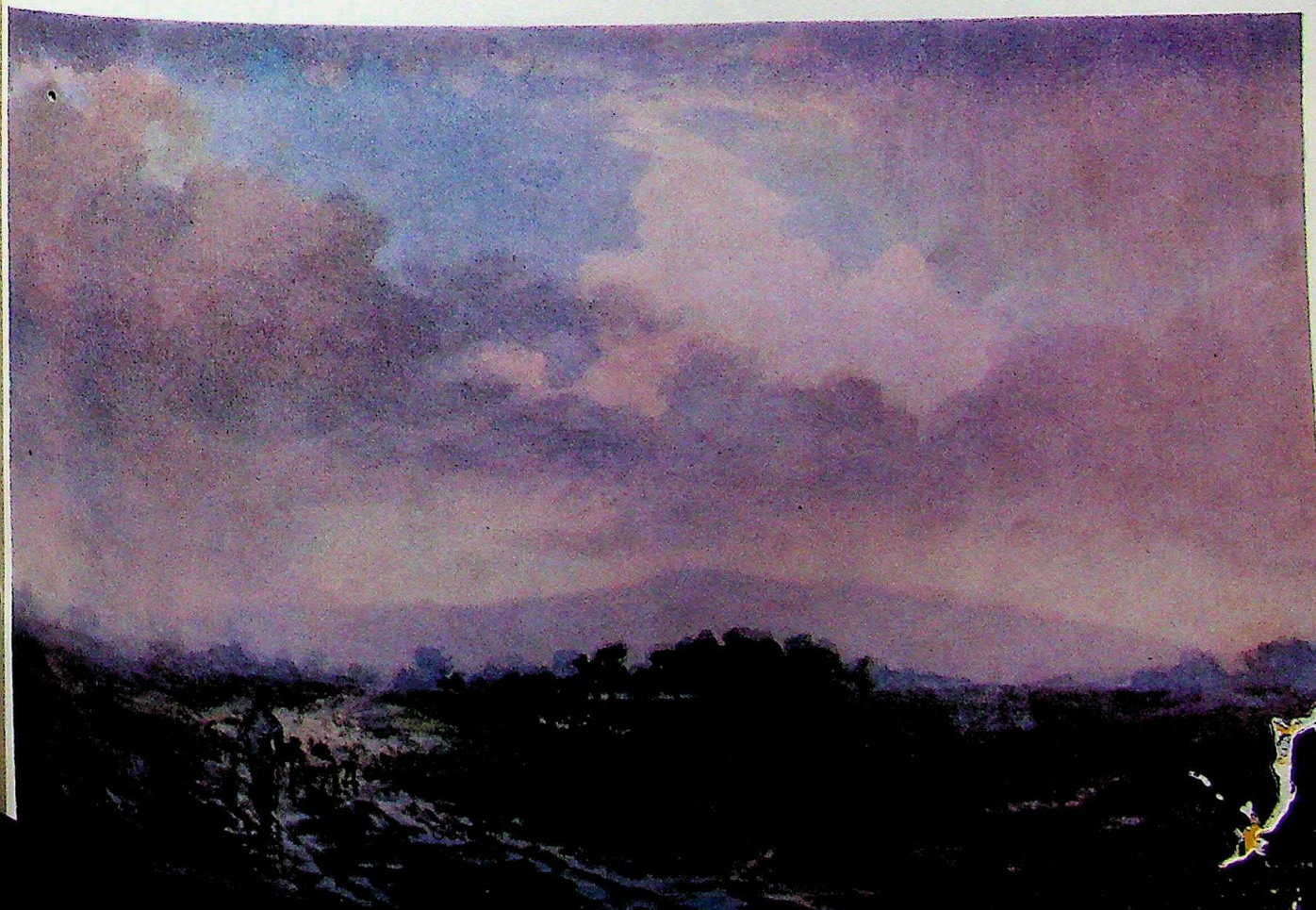


Red Gums of the Far North, *watercolour, (1931). Won the Wynne Prize in the same year, and an early watercolour (1916),* The Wet Road.



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Sallie, the Artist's Wife, *charcoal, (1912) and a photograph of the artist.*

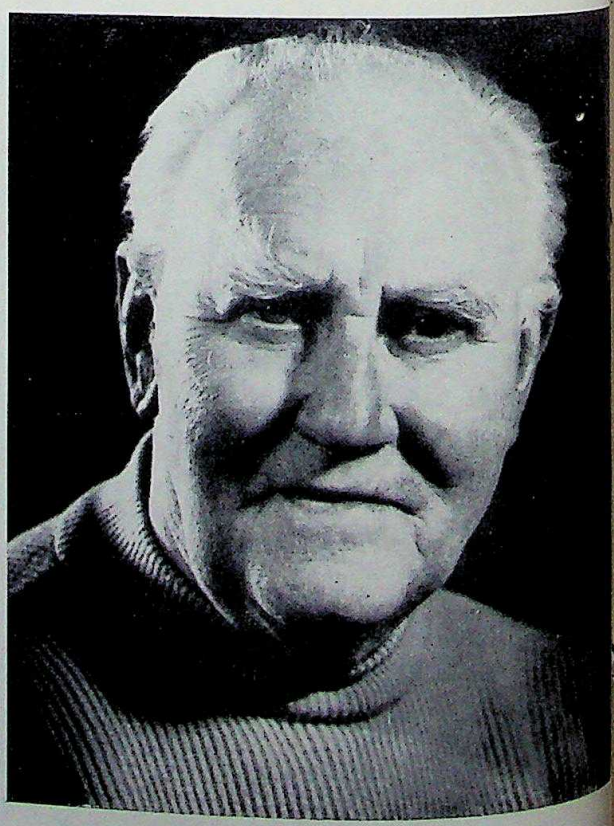
man come to town; and he was that — upright carriage, complexion fresh and healthy, workman's hands. But there was also something very distinctive about his steady blue eyes, penetrating yet reflective, and his reticent, yet almost courtly manner.

The knickerbockers Heysen had adopted in Capri, during a stay on the way home from his student years abroad, and he continued to wear them always, even to such official occasions as the investiture at Government House, Adelaide, in 1959, when he received his knighthood for services to art from the Governor-General, Sir William Slim. However, in later years, he could be persuaded to wear a tie. From the time when my husband became director of the National Gallery of South Australia in 1951, and Hans was a member of the Board of Trustees, we saw the Heysens frequently. As did all who visited them at 'The Cedars', we fell under the spell of the peace of the lovely old home, nestling its garden among the huge trees, and of the simple dignity, charm and warm intelligence of Hans and his beautiful wife, Sallie. Having coffee and strudel and cream, and Hans' special bread at the round table looking out on the sunny stoep with its flowers and clambering plants, with the view to the trees and sky, was a delightful, memorable ritual, and the conversation about art and artists was lively and stimulating. Heysen was always kindly and tolerant, but quite firm in his judgement and comments.

Towards the end of his life Heysen's very productive longevity and popularity, an influence that spread all round Australia, tended to activate against a true assessment of his creative achievement. His vision had at first been accepted and lauded but representation of Nature, which to him always had a capital 'N', as well as drawing itself, had become dirty words to *avant-garde* artists and critics in the 'forties, 'fifties and 'sixties, anxious to keep up with the latest from Europe and America. Heysen remained faithful to his found truths.

Now, a century after his birth, when -isms have come and gone and time has begun to give perspective to their long-term value, the Art Gallery of South Australia has carefully selected a comprehensive assemblage of Heysen's work in all media. Along with the historical ambiance of his emergence and development, it provides a much needed opportunity to re-examine and assess the quality of his achievement.

THE AUTHOR: *Jean Campbell is an authority on Australian ... whose husband was for many years Director of the Art Gal... of South Australia. Thanks are especially extended, not only the Art Gallery of South Australia for its assistance, but a... to the Art Gallery of New South Wales and the Ballarat ... Gallery.*



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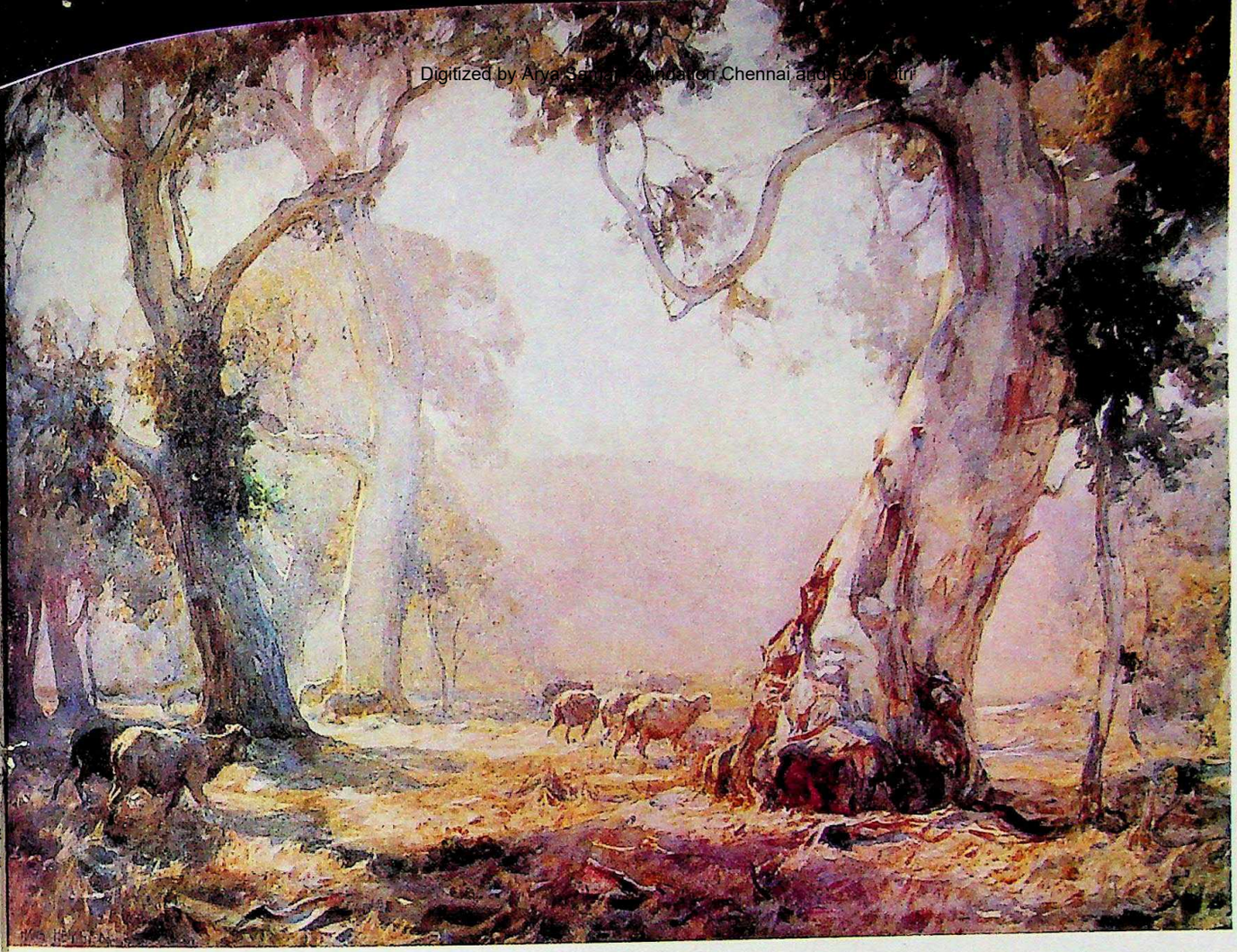

Summer, *watercolour, (1909). Awarded the Wynne Prize in that year, and* The Land of the Oratunga, *watercolour, (1932).*

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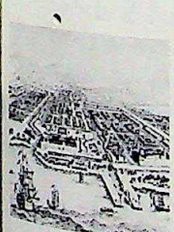

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OPPOSITE: *The mask and headdress of Kartikeya, god of war. He is a Chhau dancer from the Purulia region of northern India. He wears a 'tail' of peacock feathers, indicating that he is transported by a peacock. A Purulia Chhau dance troupe is presently touring Australia. (Photo courtesy The Asia Society, New York.)*

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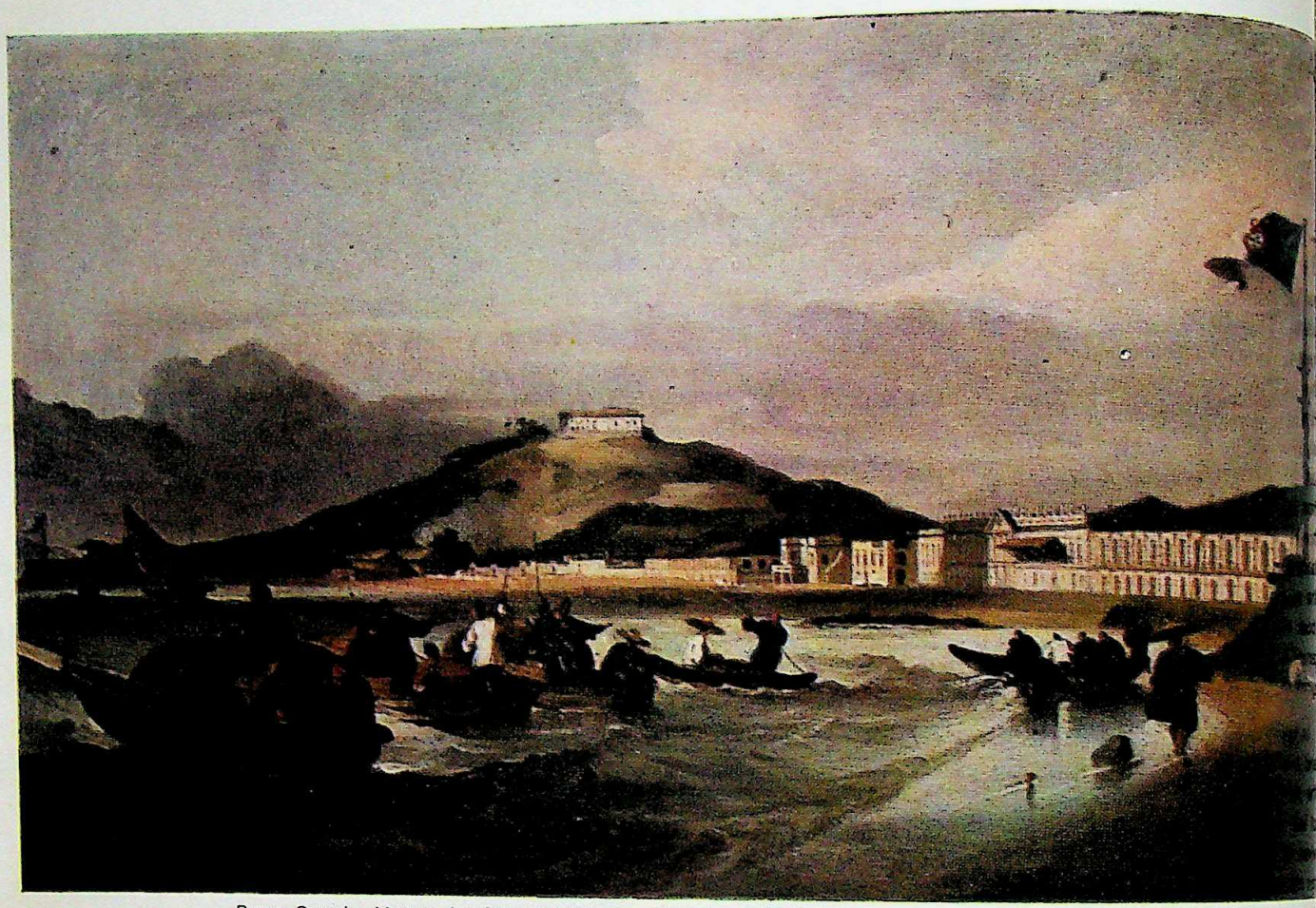

Praya Grande, Macao, *by George Chinnery. (Courtesy Jardine, Matheson and Co., Ltd., Hong Kong.)*

'AN ADMIRABLE ARRANGEMENT'

Robin McLachlan

Many creative artists find a kind of release in what is foreign, as many people feel more free to talk in a foreign language than in their own.

Writers like Maugham and Conrad and Kipling and Pierre Loti found Asia fascinating and wrote with ease, if not always with interpretative accuracy, about the area and its people. (See *Hemisphere* Vol. 22, No. 2.)

Painters such as Gauguin found their real selves in places like Tahiti; in the late eighteenth century, the English artist Thomas Daniell and his nephew made (for that time) extensive and exhausting tours of India, amassing scores of drawings and wash and watercolour paintings that were to be turned into many volumes of illustrations on their return to Britain. The Swiss painter and photographer, Louis Buvelot, settled in Australia and became the first man to interpret this country to its new arrivals, for painters up till his time (*Hemisphere* June, 1975) had been using British lenses, so to speak, to put on to canvas this strange scenery — described as being 'weird melancholy' by the writer Marcus Clarke.

Another expatriate who found his niche far from home was George Chinnery, an Englishman who spent years in India and China during the past century. The writer of the following article on Chinnery is Lecturer in History at the Mitchell College of Advanced Education, Bathurst, New South Wales.— Editor.

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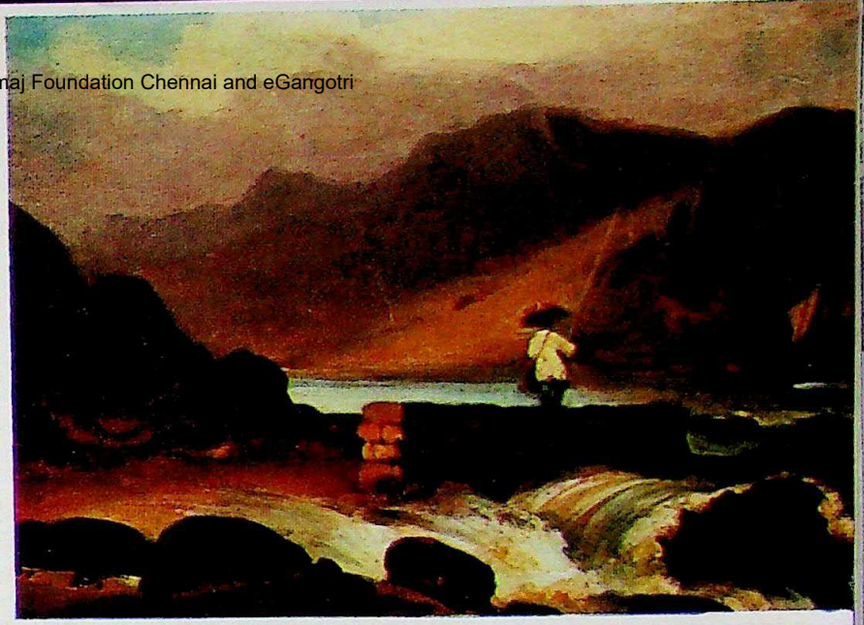
'An Admirable Arrangement'

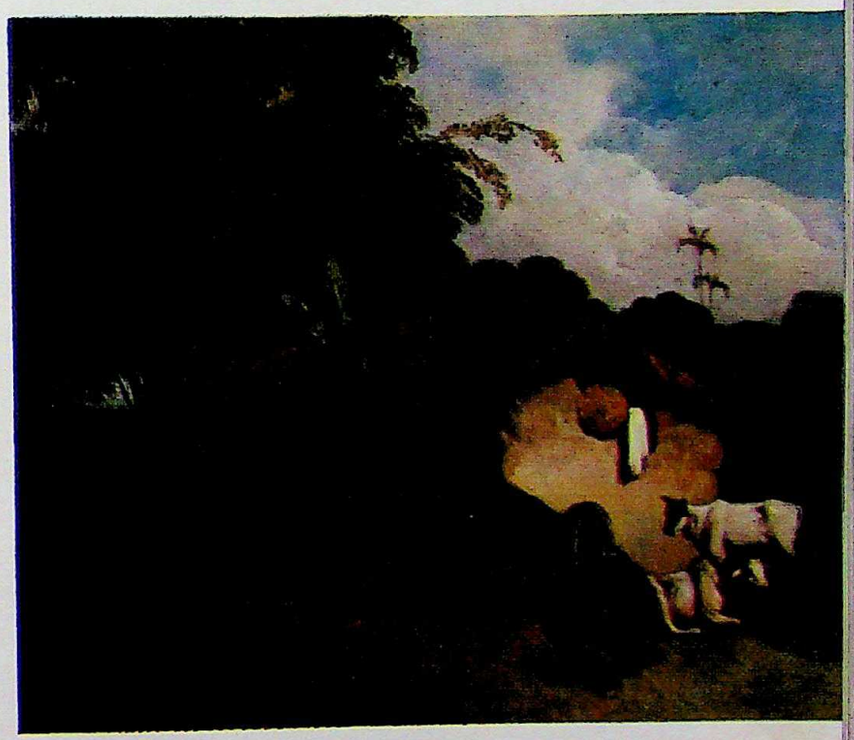
Mr. Chinnery, like many other men of extraordinary talent, was extremely odd and eccentric, so much so at times to make me think him deranged.

THE object of this description (by a friend and admirer!) was George Chinnery (1774-1852), a British artist of considerable talent and prodigious production who spent nearly his entire artistic career in Asia, first in India and then on the south China coast at Macao, Canton and Hong Kong. In his paintings and sketches, Chinnery has left a valuable visual record of Asia in the first half of the last century. His work deals with a myriad of subjects, from Chinese coolies to Indian nabobs, from palaces to hovels, from busy Chinese bazaar scenes to peaceful landscapes of ruined Indian temples. Everything, from the mundane to the exotic, found its way into his sketchbook or on to his canvas where he combined western artistic style and oriental setting in a manner that was unmistakably Chinnery's.

In contrast to the rich imagery provided by his paintings and drawings, we know very little about George Chinnery the man. He left no personal journal and only a handful of letters written to friends and acquaintances have survived. Mention of him, often quite contradictory and always too brief, can be found in a handful of contemporary books and records. These fragments of gossip portray Chinnery as a man possessed with a restless Bohemian spirit, recklessly extravagant with money and quite incapable of tolerating Mrs. Chinnery. There are tales of illegitimate sons in India and mistresses in Macao. He is described as an opium smoker and an enormous eater but a total abstainer from alcohol in all forms, drinking only tea. In India he was described as a hypochondriac; in China he was quoted as saying 'never was ill in my life'. In physical appearance, he was not very handsome, having what one friend described as the 'ugliest of faces'. But, added this friend, Chinnery's eyes brimmed 'with expression and good nature'. All who met Chinnery, with perhaps the exception of Mrs. Chinnery, found him a most delightful character, a man of charming and genial, if somewhat eccentric and enigmatic, ways.

By his mid-twenties, Chinnery had established himself in British art circles as an artist of some skill, especially in miniature portraiture. He had studied and exhibited at the Royal Academy in London and had enjoyed considerable success as a portrait painter in Dublin, where he worked from 1795-1801. In early 1802, he returned to





Chinese landscape with Mountains in the Background, *undated (Heard Collection, Peabody Museum of Salem, Photograph, Mark Sexton);* Farm Scene, *done in India about 1805 (Jardine, Matheson and Co., Ltd., Hong Kong);* Landscape, *undated. (Heard Collection, Peabody Museum, Salem. Photograph, Mark Sexton.)*

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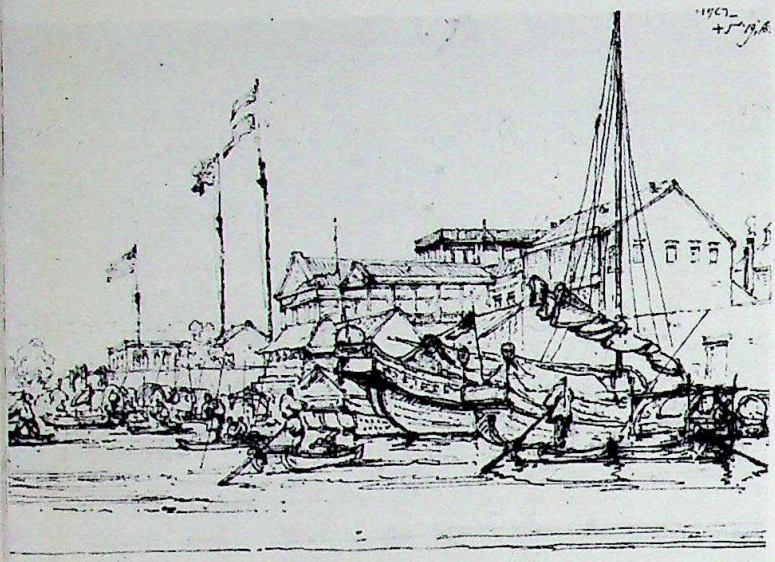

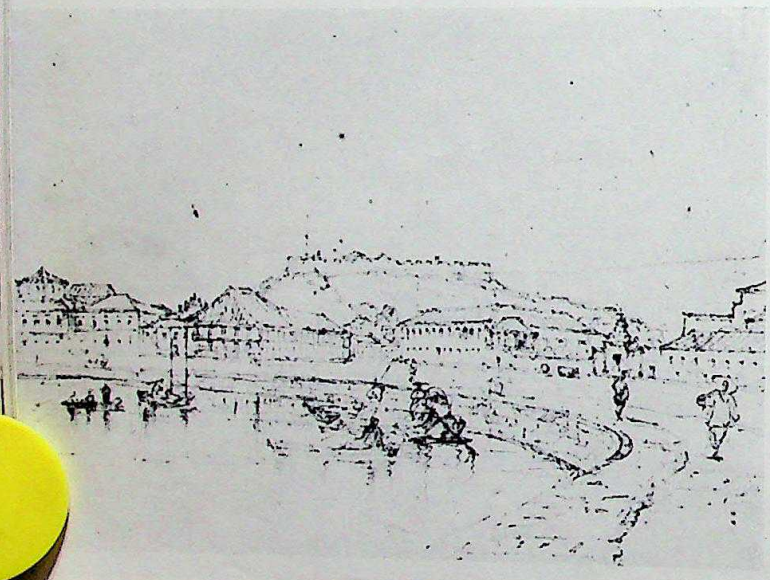

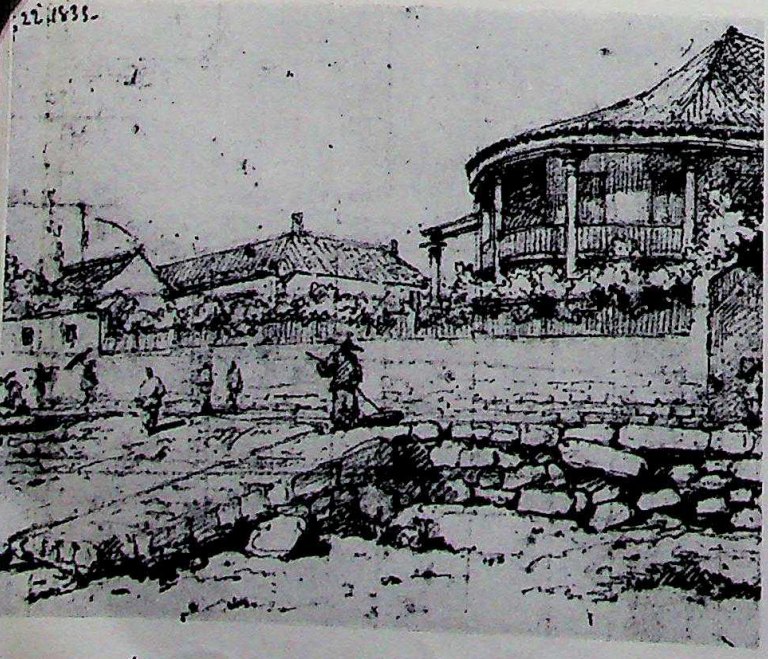

London and opened a studio in the fashionable Grosve Square area. However, his stay in London proved to b very short one. In June of 1802, he quietly departed f London for Madras with the intention, it seems, of sett in India and working there as a portrait painter. Why should have chosen to abandon a seemingly promis career in Britain for probable obscurity among East In Company clerks and officials is difficult to understa His sudden departure for India is usually attributed pressing debts and his wife, a woman he often descri as the 'ugliest woman he ever saw in the whole co of his life'. His portrait of her in the National Gallery Ireland does not support this claim, but why he sho have had such a strong aversion to his wife remains mystery.

Debts and wife aside, Chinnery's prospects as an ar may not have seemed as promising to him as they appe to one looking at his situation almost two centuries la Chinnery may have been finding the life of an artist London too competitive after provincial Dublin. Comm sions for portraits were not forthcoming in the ea months of 1802 and the future looked uncertain. Ind however, appealed to Chinnery on both practical a romantic grounds. There would be little competition India for a portrait painter of his skill and it was not land in which he would feel himself a stranger as he h several relatives working and living there. He may a have been attracted to India like many Britons of his d by romantic notions of the Orient. Chinnery was not t first European artist to reject Europe in favour of t Orient, but he was unique among artists of his period that he stayed and made his home and career in As never to return to Europe.

With the aid of his relatives in Madras, Chinnery w quickly established himself as a portrait painter. It w probably through his relatives that Chinnery came to the portrait of Mr. Thomas Hoseason, a naval officer Madras. This was one of his first commissions in Ind Other commissions followed and Chinnery soon fo himself in great demand as a portrait painter and earn a very substantial income. Over the next two decad Chinnery painted scores of portraits of British offici and local Indian royalty and their families.

But as well as painting portraits, Chinnery also fil canvases and sketchbooks with scenes of Indian life a countryside, crumbling temples and rural villages, peop going about their daily tasks. It was in this type of wo that Chinnery's talents and interests as an artist were be displayed. As a portrait painter, he could be extreme capable, but all too often his portraits were left unfinish in matters of detail and background. His preference to off painting or sketching outdoors rather than remain in his studio working on his portraits caused one exa

Three pen and ink sketches given by Chinnery to Sir Ja Matheson. (Courtesy Jardine, Matheson and Co., Ltd., Ho Kong.)

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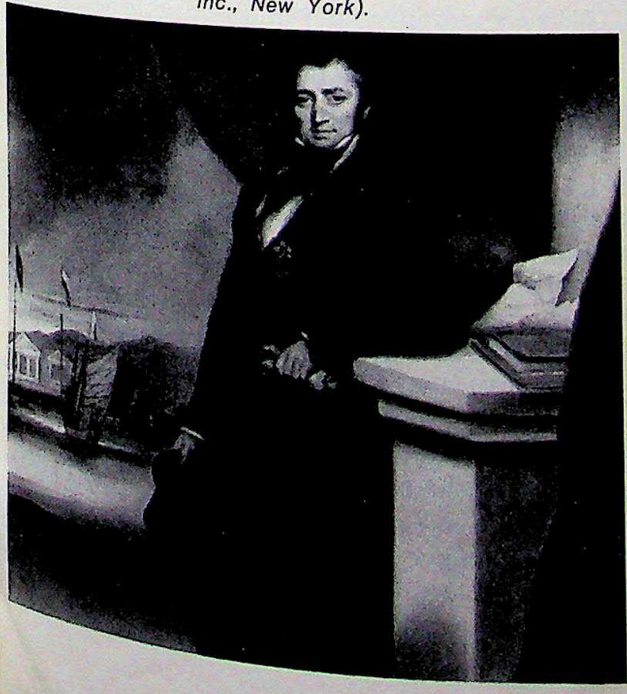
Above: Pencil drawing, 1826 (Smithsonian Institution); below: Portrait by a Chinese of an unknown man, formerly thought to be William Jardine, undated, school of Chinnery (Honolulu Academy of Arts); above, right: Mr. Thomas Hoseason, a naval officer in Madras, where Chinnery became established as a portrait painter; below, right: Eurasian Lady Holding a Heart-shaped Feather Fan *(both by courtesy Berry-Hill Galleries, Inc., New York).*



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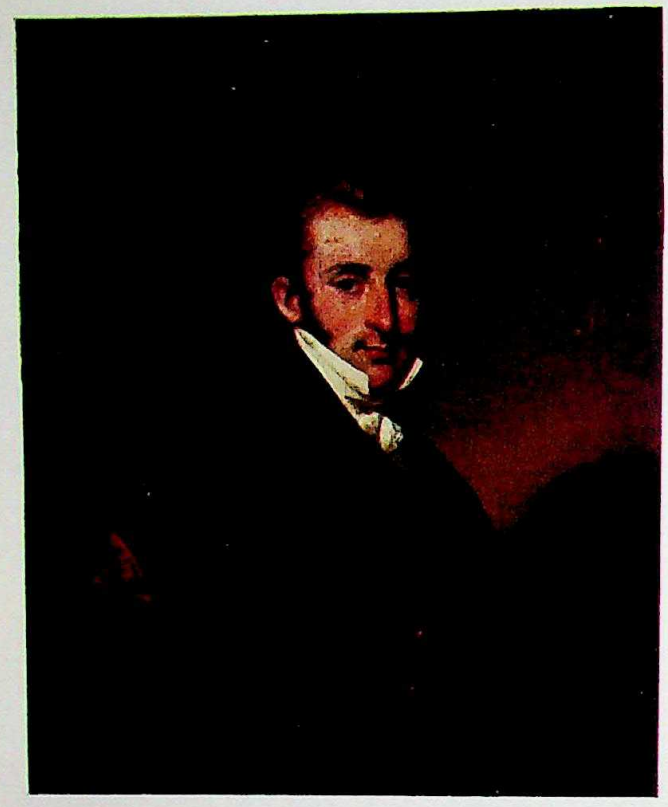
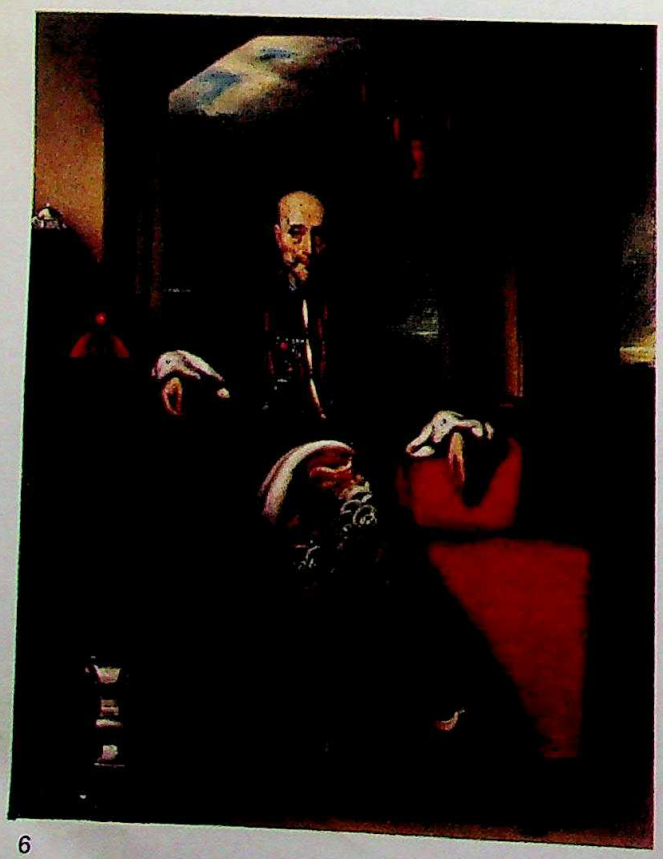


Portrait of Sir James Matheson and Portrait of the Chinese merchant, How Qwa — a copy of a Chinnery painting by an unknown artist. (Courtesy Jardine, Matheson and Co., Ltd., Hong Kong.)



perated client, who it seems had been waiting some t
to have a portrait finished, to remark of Chinnery: 'He
so uncertain a fellow that I have no dependence on
promises. He likes landscape painting a thousand ti
better than portrait painting, . . .'

Between 1817 and 1819, Chinnery brought out his
and two children, now in their early teens, to Calcu
where he had by now opened a studio. His attempt a
reconciliation lasted only until 1825 when, with the m
riage of his daughter and the death of his son, Chinn
found he could tolerate his wife no longer. Moreov
his complete lack of money sense had led to his accru
debts of a large order; himself spoke of debts in t
neighbourhood of forty thousand pounds. So, once ag
restless Chinnery, now in his early fifties, suddenly ab
doned wife and career, this time for the south China coa
A painting found among his possessions after his de
depicted a European, presumably himself, with solar top
in hand, bowing goodbye to the city of Calcutta with
ship in the harbour about to depart. At the top of th
painting there was a scroll in which were the wor
'thermometer 200°, too hot for me'.

Chinnery seems to have accepted his financial incom
petence and continual indebtedness as a matter of cour
and not of embarrassment. Once when a legal noti
appeared in a Calcutta paper concerning his debts a
describing him as 'George Chinnery, an absconding
debtor', he was embarrassed and furious, not at bei
publicly identified as such, but at the rudeness of th
notice in not addressing him as Mr. George Chinnery
George Chinnery, Esquire. When a well meaning frie
commiserated with him over being publicly labelled as
debtor, Chinnery responded with a roar: 'Is that all y
see there? Debts, what on earth are debts? Fiddlestic
for your debts! (with emphasis). Think of George Chinne
neither Mr. nor Esquire; of George Chinnery, without he
or tail; that is too much to bear!'

Chinnery arrived in the Portuguese settlement of Mac
on 29 September, 1825, but decided to make his ho
temporarily in nearby Canton. In China at this time,
foreign trade, or at least the legal portion of it, was co
fined to Canton, where the foreign merchants we
required to work and live in a small settlement of co
bination residences and warehouses known as 'factorie
situated on a narrow strip of land along the river ba
The merchants remained at Canton during the win
trading season and in the summer, when the year's trad
was completed, they went to nearby Macao to join the
wives and families.

This tiny community of European merchants at Cant
provided Chinnery with sanctuary from both his creditor
and his wife. His creditors could not bring legal acti
against him and his wife could not follow him to Canto
as Chinese government regulations prohibited the presen
of European women there. Chinnery thought this a ma
delightful arrangement. Shortly after his arrival in Cant
he was heard to remark 'Now I am all right; what a k

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One of h
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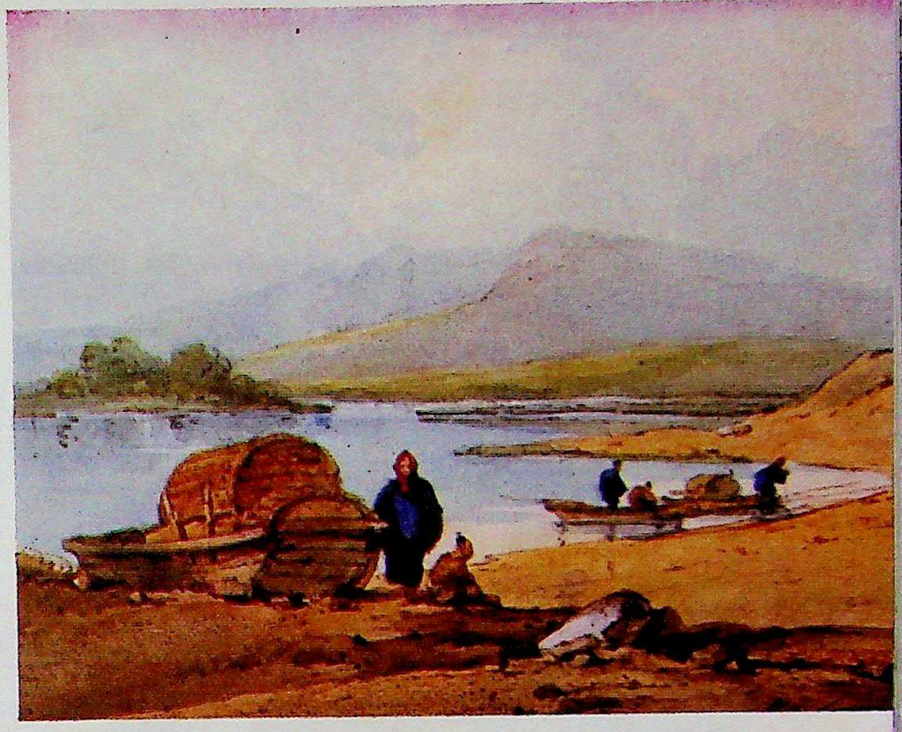
providence is this Chinese Government, that it forbids the softer sex from coming and bothering us here. What an admirable arrangement, is it not?' He then turned his eyes skyward and exclaimed, in Latin, 'Praise the Lord'.

There are several contradictory accounts of Mrs. Chinnery's actions following Chinnery's sudden departure from Calcutta. One story is that she followed him out to China, but being prevented from landing at Canton, languished on board ship where she contracted smallpox and died. Another story has Mrs. Chinnery giving up the chase and returning home to Britain. W. C. Hunter, an American merchant at Canton who knew Chinnery well, implies in his reminiscences of Chinnery that Mrs. Chinnery never reached the China coast and that for a number of years Chinnery sent remittances to her 'to keep her quiet' and away. However, Chinnery was for many years fearful that his wife would suddenly descend upon him. After his return to Macao from Canton, where his wife would have no difficulty of access, he kept a trunk packed in case he had suddenly to flee back to the safety of Canton.

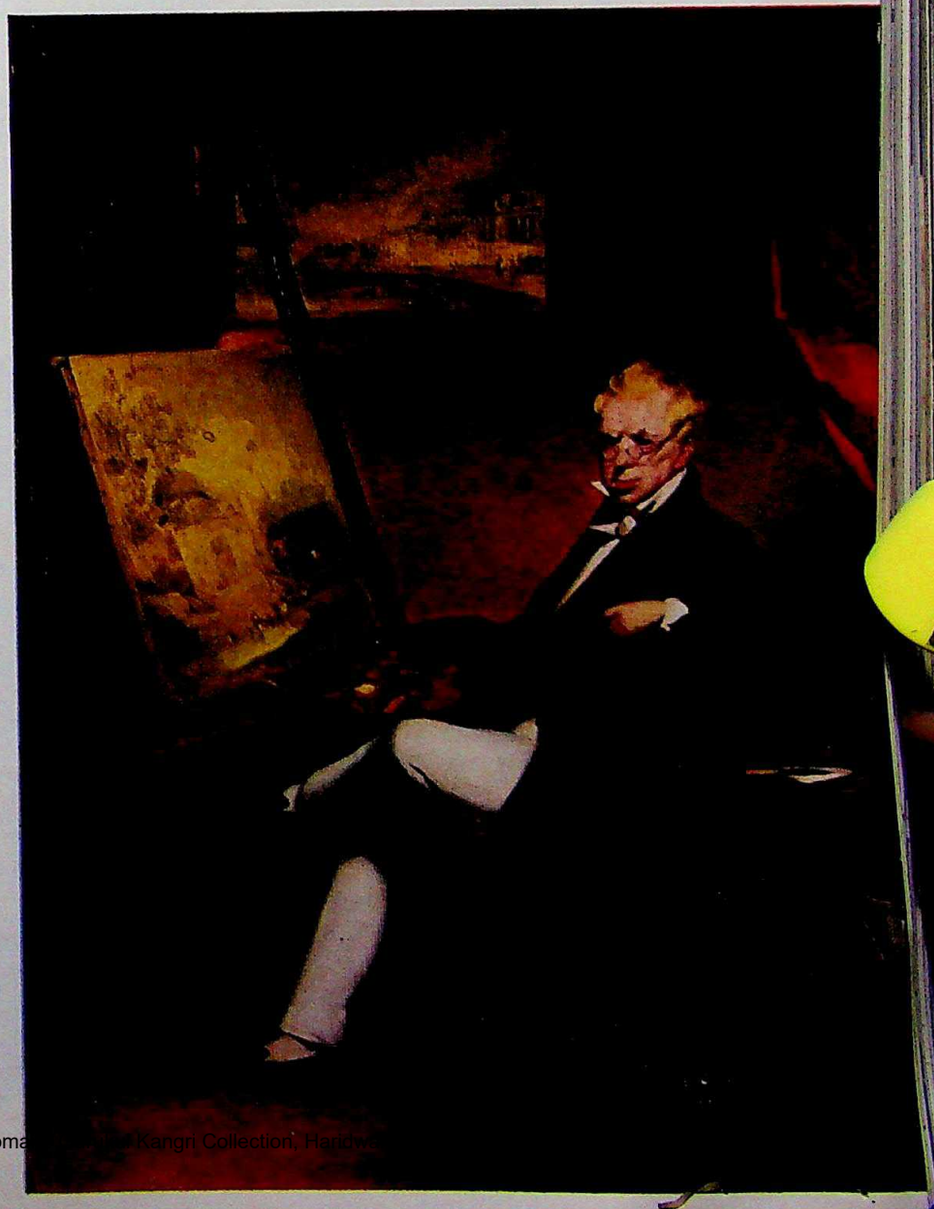
Except for brief visits to Canton, and in later years to Hong Kong, Macao was to be Chinnery's home for the next quarter of a century, until his death in 1852. Chinnery seems to have found happiness in this minuscule crossroads of European and Chinese culture. One would have thought that as an artist he would have quickly exhausted Macao's offerings, but such was not to be the case. In fact, the very limits of Macao may have caused him to strive for a deeper insight in his paintings and drawings of the people and scenes about him. It is generally considered that Chinnery's best work was produced during his time in Macao. A measure of this is that between 1830 and 1846, fourteen of his portraits were exhibited at the Royal Academy in London.

As in India, Chinnery earned his living by painting portraits, and in the course of twenty-odd years he painted the portraits of many of the Chinese and European celebrities of the south China coast, including merchants, missionaries and Chinese *Hong* merchants. To assist him with the tiresome matter of costume and background detail in his portraits, Chinnery had a number of very able Chinese assistants trained by himself. However, not only did the assistants finish work he had started but, in time, began to sell their own work as Chinnery paintings and at much lower fees than asked by Chinnery.

One of his portrait subjects, Miss Harriet Low, the young niece of an American merchant, has left her own portrait, in words, of Chinnery. Her journal of her life in Macao in the early 1830s contains many references to the artist. To quote just one of several entries referring to Chinnery, one is given this very whimsical account of a visit to the artist's studio.



Landscape. *(Courtesy Mandarin Hotel and Hong Kong Tourist Association); self-portrait by George Chinnery. (Courtesy National Portrait Gallery, London.)*



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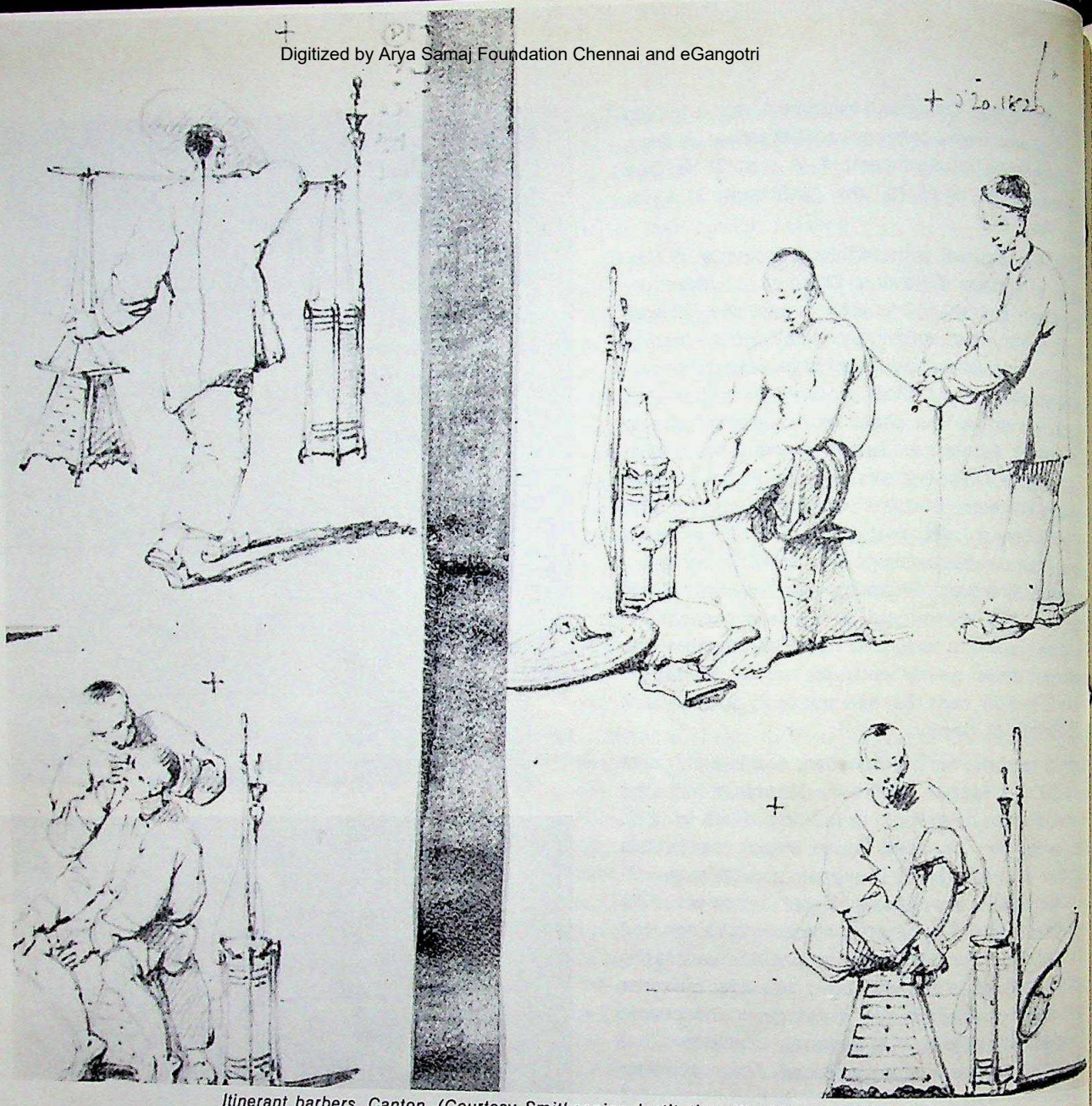

Itinerant barbers, Canton. (Courtesy Smithsonian Institution, Washington, D.C.)

This morning I went . . . to that amusing man Chinnery and stayed until after two sketching. There is a good deal to be gathered from his conversation and some of his similes are most amusing. He has been a great observer of human nature, for which he had every opportunity, his profession having brought him in contact with people of high and low degree. He has been in Calcutta for twenty years and has seen a great variety of characters in that changing place. He has excellent sense and plumes himself upon being although not handsome, excessively genteel. I think, however, that his personal appearance is rather against him, for he is what I call fascinatingly ugly, and what wtih a habit he has of distorting his features in a fiercely aggressive manner and with taking snuff, smoking and snorting, I think, were he not so agreeable he would be intolerable. But, to give him his due, he is really polite and speaks well of everyone.

Although portrait work was his main source of income, as in India his heart was in the sketching and painting of landscapes and scenes of everyday life. Most fine mornings would find him outdoors, often as early as f o'clock, sketching details of life and scenery in Macao Canton. Over the years, he filled countless sketchboo and canvases with scenes of junks and fishermen, Chines peddlers, Tanka sampan girls, coolies at work and old m at rest. In 1839, he told a visitor to his studio in Mac that he already had six thousand sketches of 'Easte scenery' and was constantly adding to his collectio When he died his studio was found to be filled w countless sketches and drawings and oil paintings, ma of them, characteristically, only half finished. Unfortunate only a small fraction of Chinnery's work has survived t ravages of time, climate and wars.

Chinnery remained an active artist until the sickne and infirmities of old age made sketching and paintin an impossible task. He died in his seventy-ninth ye on May 30, 1852 in Macao. His grave can still be fou in the Old Protestant Cemetery where it is marked by imposing tombstone that looks somehow unfinished.

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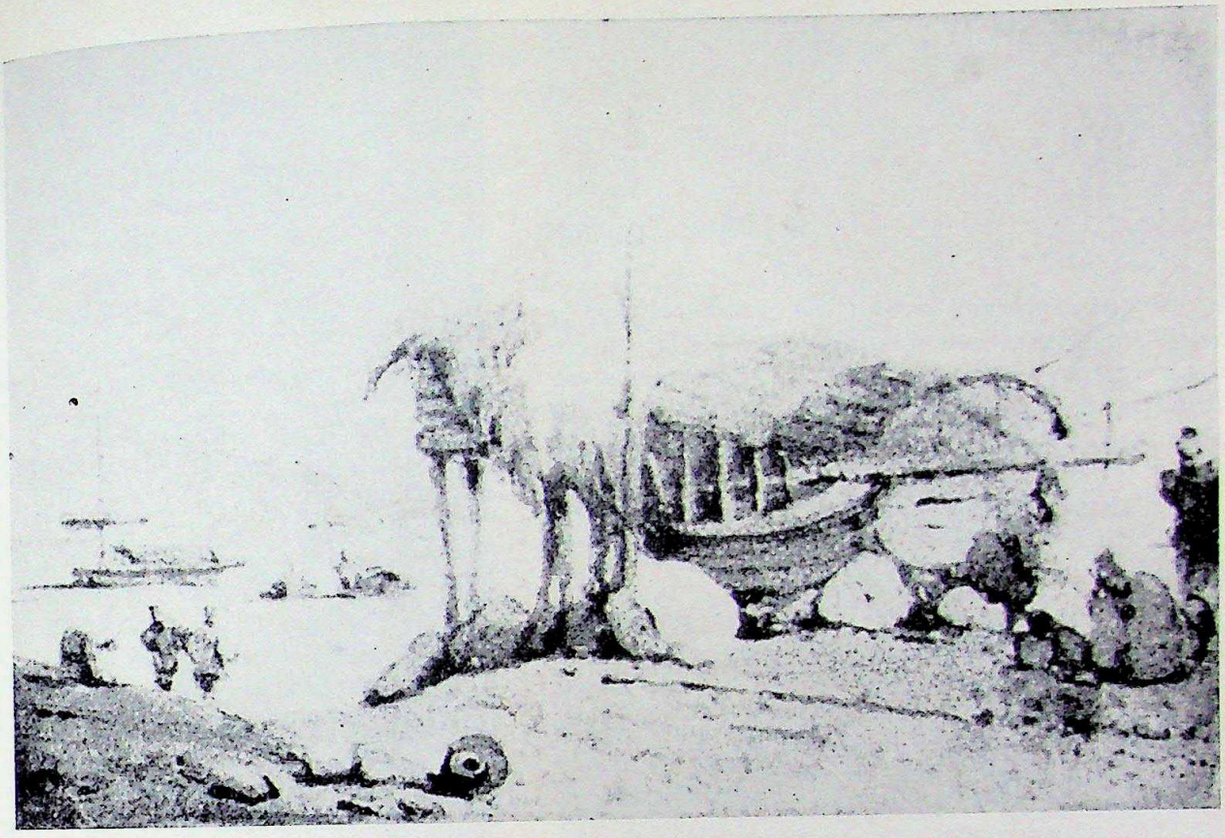
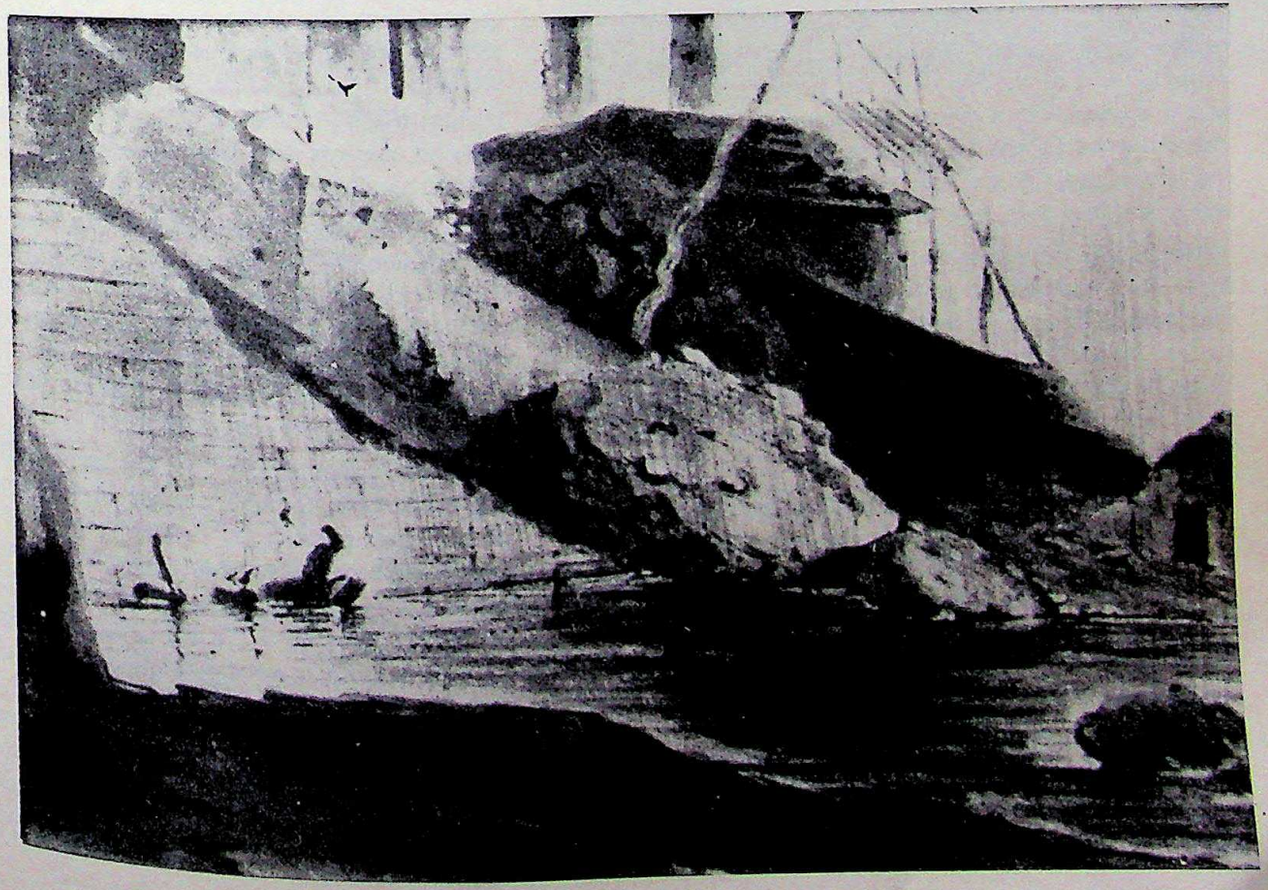


Two landscapes, unidentified, re produced from sepia originals.



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DEFENDING THE FARM

Kylie Tennant

LAST year the apple orchard was a beautiful sight — every bough laden with blue, green and scarlet parrots. There were more rosella parrots than fruit. Not that we begrudge the rosellas their apples but they knock off more than they eat, taking a bite and throwing down a scatter of fragments. One day there is a tree laden with ripening apples or pears and the next it is stripped and the parrots industriously move on to the best remaining in the next row.

On the road into town there is a big professional orchard. I asked the owner, 'Mr. Charles, what do you do about the parrots?'

'Parrots?' He was amazed. 'No trouble. If there are fifty rosellas on the trees I shoot twenty-five and the others don't come back.' (No indeed, they came up to our place.)

'But, Mr. Charles, aren't parrots *protected*?'

Mr. Charles looked shocked. 'It is the law', he said sternly, 'that *nothing* is protected that bothers a farmer.'

Even so, going sadly home I decided that we couldn't shoot rosellas. We must find some other defence. When we first came to the farm I had thought that our cat, Mrs. Turtle, might frighten birds out of the orchard. She would occasionally bring in a mouthful of pitiful golden feathers; some tiny songster. While great bush rats were tearing at the walls of the homestead Mrs. Turtle would appear with a mouse so minute you wondered why she bothered to ask for congratulations or stow it under the sideboard, to be found in a mummified condition when she had forgotten it.

Mrs. Turtle always looks as though she is wearing her fur — old, moth-eaten fur — rather than growing it and shedding it in tufts. A dowager, she has now decided to be an indoor cat and the permanent ornament of the bedfoot, hissing in frightened contempt at the new cat, Yang, who, far from disciplining the parrots, bends his best efforts to beating up Mrs. Turtle.

Yang is a Persian with long, smoky black fur and white whiskers who looks like the negative of a cat. He was raised as a vegetarian and given to us because he was sick and had sores. Since he became a meat-eater he has recovered, developed a gloss, a swagger and a miow like a rusty bedspring. He has become a feline bovver boy and poor Mrs. Turtle can no more cope with him than an old lady with a slum mugger.

Strange that the dog is also black. She was given to us (also from a vegetarian household) because she was growing too big and she barked. As soon as the dog, Blackberry, was guilty of meat eating she expanded like a concertina, took on shining plumes and is now larger than a wolf. Blackberry and the cat, Yangie, sport together but both are intimidated by the rooster, also black he reflects a white light. He was given to us because he was being beaten up by other bigger roosters. Now he leads his white hens to the farthest corners of the orchard, chuckling over morsels he finds them. He has baggy black Turkish pants and fights the cat and dog.

Would it be possible to train Blackberry to chase rosellas? No, she is afraid of the rooster. Yangie? He is ferocious enough but doesn't apply himself. He sports. Could we train the rooster champion fighter to chase parrots? He only defends his hens.

Our friend, John Russett, at the strawberry farm has two scarecrows. One is male and the other female, sturdy above the orderly rows of plants, with a Germanic stoutness to withstand years of gales. Mr. Russett's grandchildren made them, he told us, over the holidays. 'You just take some straw and stuff it in the clothes and stitch or wire them up. Then you take a tomato stake and drive it right through.' He illustrated with a twist of the wrist. 'And crunch it well in.' He smiled happily. 'Nothing to it.'

Observing that the scarecrows, besides looking so respectable and neat, as though they came of a good farming family, seemed to do their work efficiently, we decided to make two scarecrows, two defenders of our own perimeter of the orchard. They didn't turn out as well as the strawberry farm scarecrows. Dracula looks so sinister in his black coat that he may not frighten the parrots but he certainly frightens me. I realise what the Duke of Wellington meant when he spoke so dubiously of his troops in the Peninsular War. You can imagine Dracula stealing towards the farmhouse some starlit midnight, a furtive, stealthy figure.

Son of Dracula, however, lolls on his suicide stake at the crossroads of apple trees, slack and paunchy no matter how much straw is shoved into him. His hat falls off. If I were a bird, I would make a nest in him, twitter at him. Imagine being a failure as a scarecrow! But to be fair it isn't his fault. Some people are talented at making scarecrows. Others just don't have it.

Our best defence may yet be the dog, Blackberry. We might train her to rush barking at the flocks of parrots. She rushes barking at everything else, but I doubt if Blackberry could do anything as useful as this.

The other morning I saw a most beautiful sight. A hawk! Now if only the hawk could be lucky in his love life and find a mate, and if they could build a nest on the ridge behind the house, our problem would be solved. The rosellas would leave immediately. There is no way of encouraging a hawk but we can always hope.

— The author is one of Australia's best-known writers.

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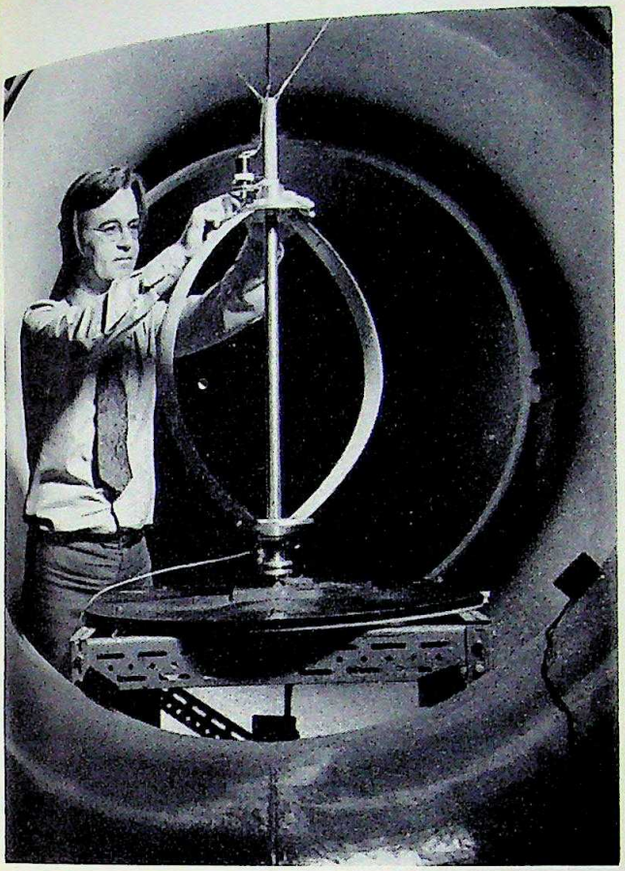

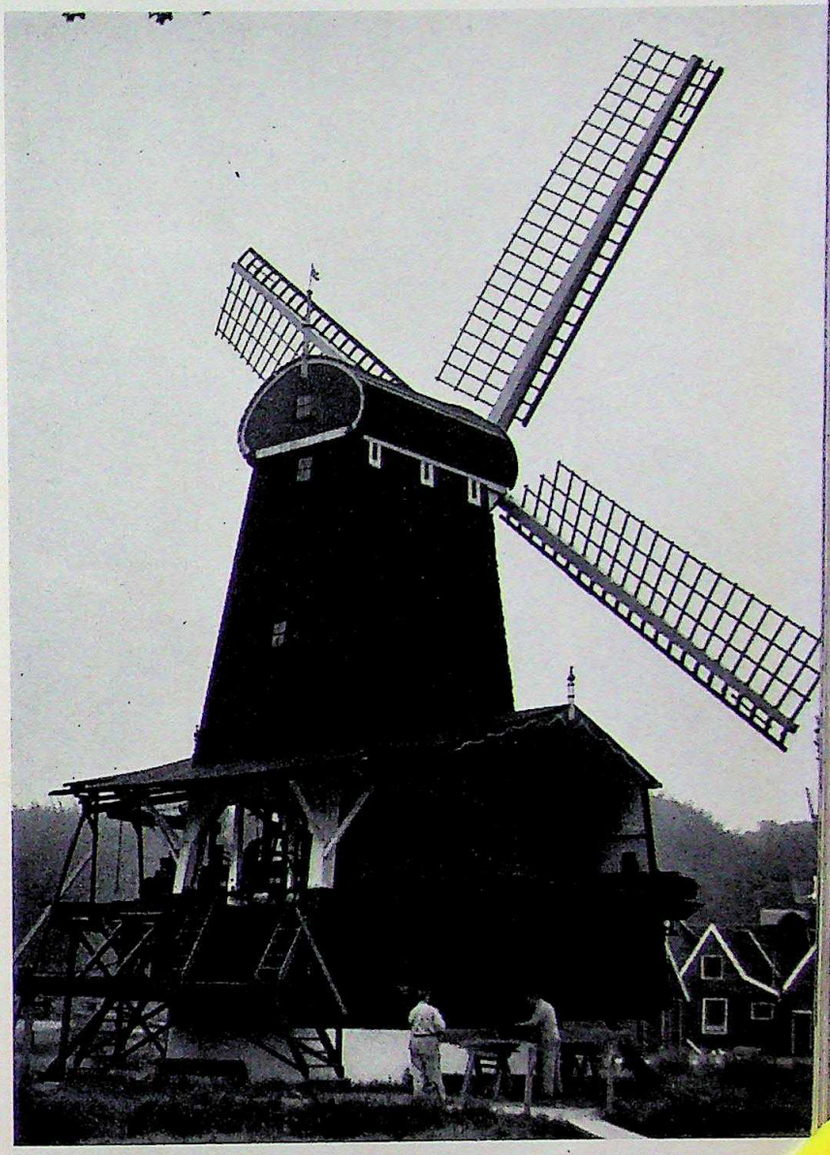

A vertical windmill under test at the School of Mechanical, Aeronautical and Production Engineering, Kingston Polytechnic, England. The mill was first designed by G. J. M. Darrieus in France. At the widest point of the bow, the 'tips' travel at four times the wind speed applied. It is estimated that a mill five metres across would generate five to six kilowatts of energy, rotating at a hundred and twenty revolutions per minute, even in moderate conditions. At right: a familiar Dutch mill, operating a sawmill. Its origin goes back to the Middle Ages. (Photos: Central Office of Information, London and Camera Press.)

THE AIR GOES BY

L. F. Mullett

For centuries, from the most primitive sail boat, to the highly technical mill for generating current at the top of the page—a mill revived from a model worked out more than thirty years ago—mankind has used the wind as a means of generating power: in the form of propulsion for his craft, to draw water from the ground, to grind his cereals, for gliding as a sport (and even as a wartime means of silent transport to surprise the enemy), and even, lately, for land-yachting and the almost mystic sport of being suspended far above the ground in a hang-glider.

Now that mankind's store of fossil fuels is fast disappearing, the power of the wind is being sought again. This article, by the Wind Energy Consultant to the Institute of Energy Studies, Flinders University, and formerly an engineer in the Planning Department of the Electricity Trust of South Australia, together with some of its illustrations, indicate how this is being done.— Editor.

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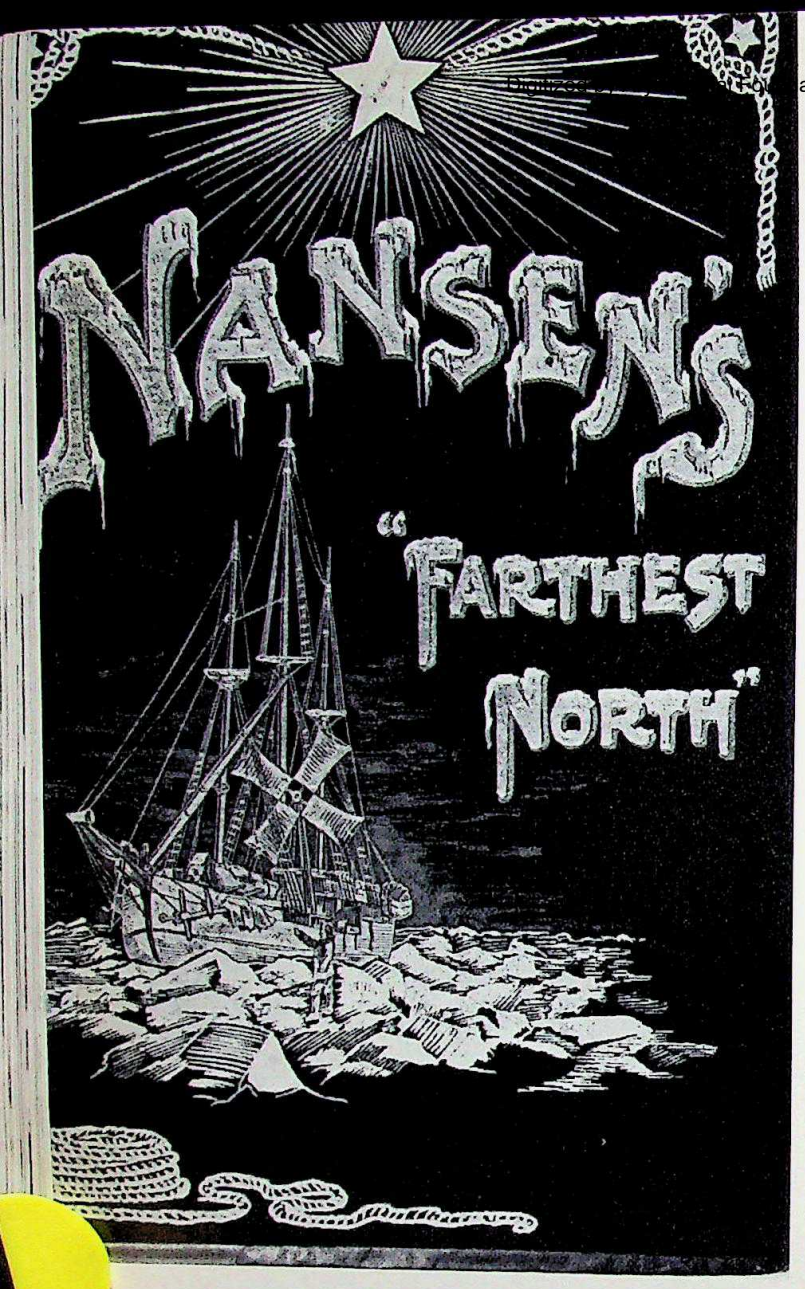

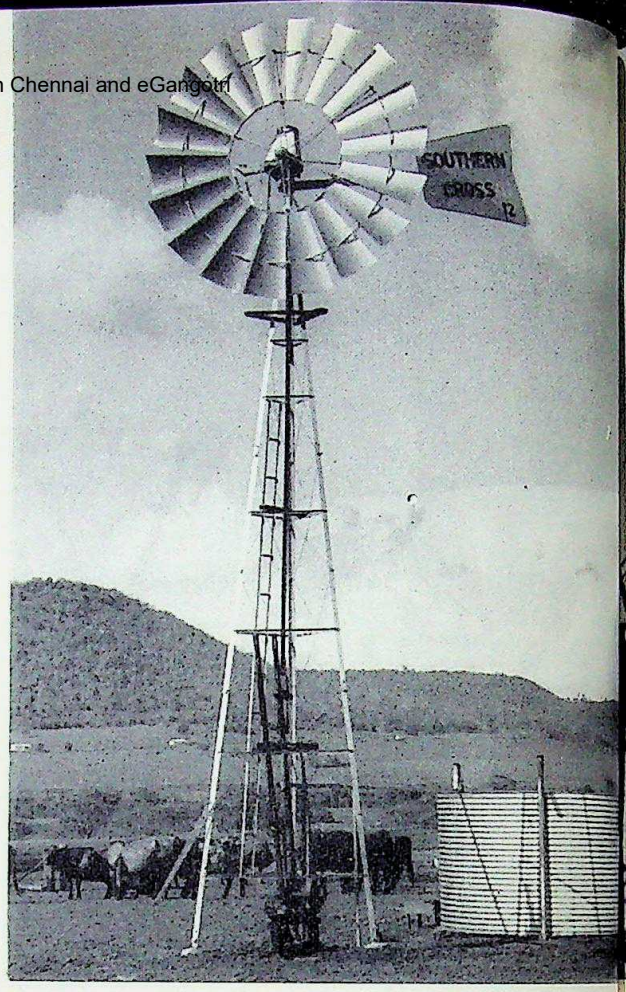

The cover of Farthest North, *the story of the Arctic expediti of the Norwegian Fridjof Nansen (originator of the Nans Passport) shows his vessel* Fram *(still preserved in Oslo) w her* [1893] *windmill used to generate electricity . . . 'The win mill, which has been ready for several days, has been tried last and works splendidly. We have beautiful electric light toc . . . What a strong influence light has on one's spirits!' A ye later the mill was blown to pieces, later repaired and work until 1895. Scott, in his* The Voyage of the Discovery (190 *says of the vessel's mill: '. . . it revolves merrily'. That was March; by May, during a southerly gale, 'it snapped off sho and now lies a wreck on the forecastle'. Above, left: A famil*

THE general awareness most people have of a looming energy crisis is matched by much misunderstanding concerning present uses of energy and practical alternatives to fossil fuels. Less than a third of the world's energy is used in the form of electricity; more than a third of the world's energy is used for transport. Because so far no long range substitute has been developed for the internal combustion engine, a run down of fuel for low cost passenger transport and freight haulage will have disastrous consequences. The crunch will probably come within the next twenty-five years. A program to find alternative sources of energy to keep transport moving must therefore get high priority.

The energy we have most of — solar heat — is the hardest to harness. It is easy to say that solar energy is clean, non-polluting, perpetual. But how can it be stored? Storage of solar heat is one of several major engineering problems to which a solution is not yet in sight. I doubt whether we shall ever be able to harness solar heat received on the earth's surface as a substitute for fossil fuels on a scale large enough to satisfy present and projected future energy requirements. The sun, however, causes wind movements around the earth—a form of energy we should be able to harness.

Heat from the sun does not reach all parts of the earth's surface with equal intensity; it is greatest at the equator and least at the Poles. Thus the earth, because of its shape, functions as a huge engine pumping heat equally to the upper altitudes for radiation back into space. Air carries the heat. In this way the earth has held a constant, low-contrast temperature pattern for millions of years.

Air in motion contains kinetic energy which can be trapped by a turbine to rotate its shaft and generate power. A power station that uses steam has the same objective, but to produce the steam which drives the turbine shaft a large furnace and coal are required. The sun, as the furnace that sets air in motion, is non-polluting and costs nothing to maintain.

Because the energy received from the sun is immense by standards of measurement devised by man, the energy in the wind system is correspondingly immense. But

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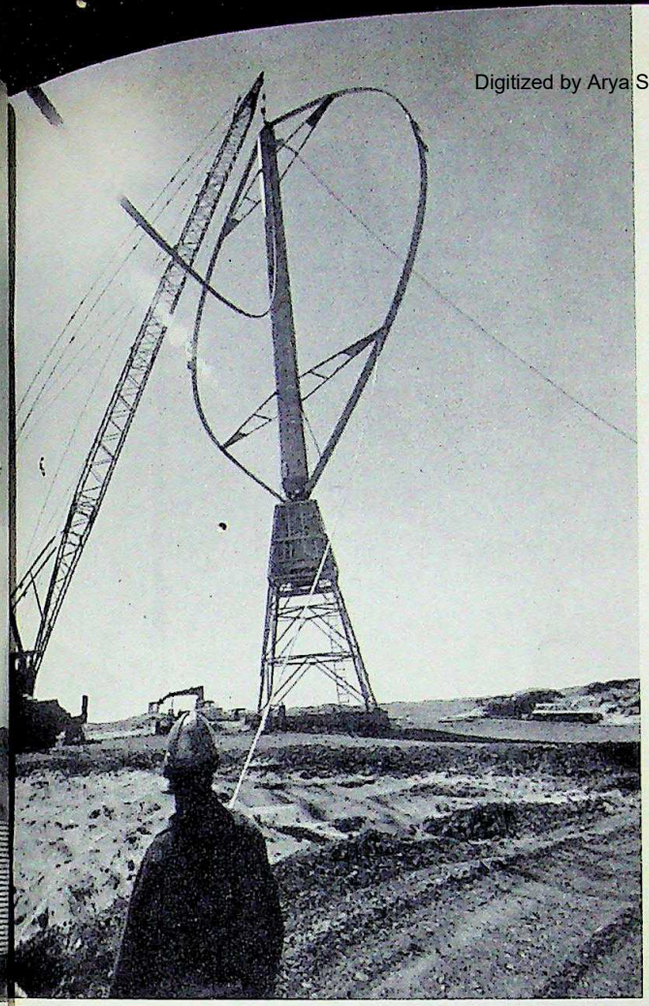

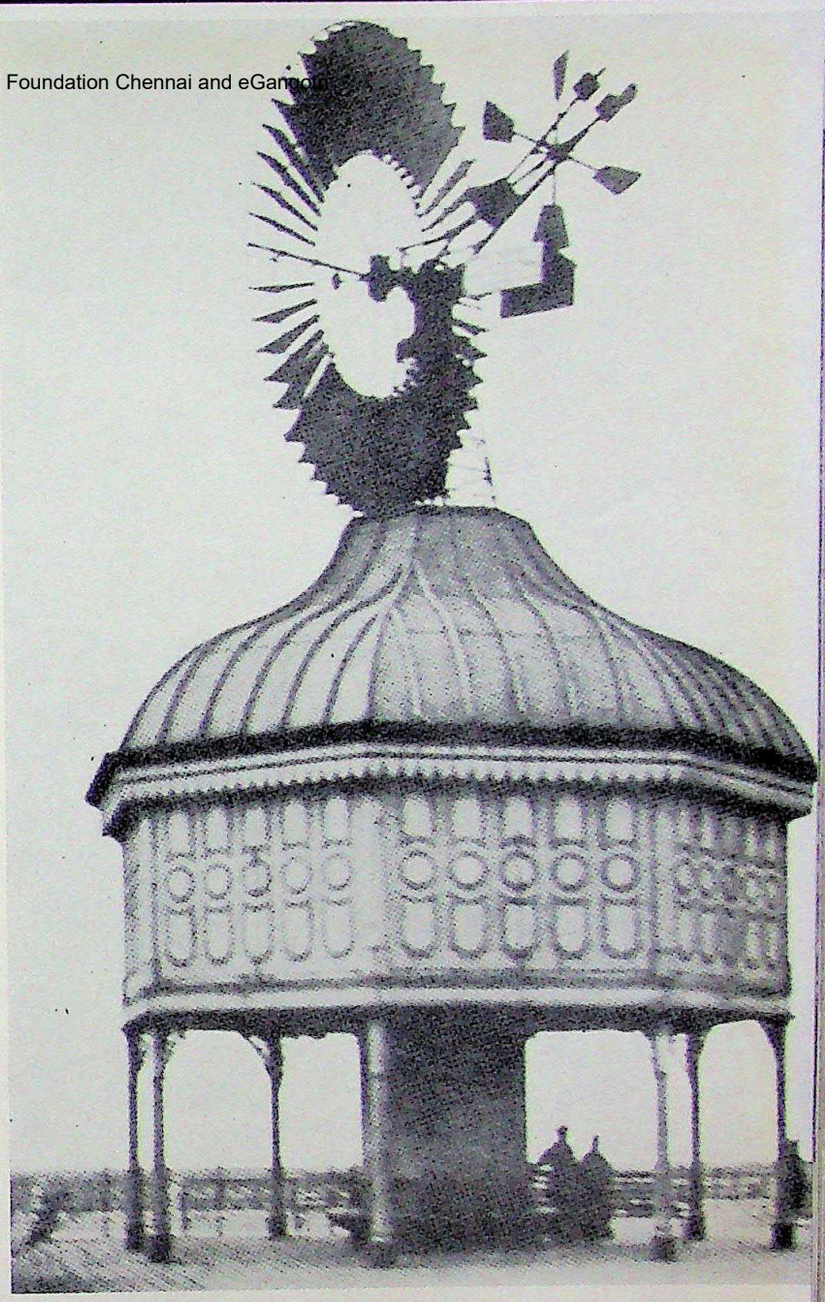

sight in Australia's outback: the windmill pumping up water from an underground source. Above: What is claimed to be 'one of the most ambitious experimental wind-turbine projects in the world' 'for the world's windiest isles'. the Magdalen Islands, in the Gulf of St. Lawrence, Canada. Right: a wind engine and pump-house built at Southport, England, about 1905. The engine was for lifting water into the tank for street washing and flushing sewers. (Photos: Private collection, Southern Cross Machinery, Alcan (Canada) and Canadian High Commission in Canberra, Batsford Books (Windmills and Watermills) *and J. Kenneth Major, a co-author.*

can tap only a small amount of this energy — the thin layer within reach of our turbine blades. This amount, however, is still very considerable for man's needs.

Two scientific surveys were made in Britain and in South Australia in the early 'fifties to quantify the energy in the wind. More recently the National Aeronautics and Space Administration has begun a similar investigation in North America. Using data collected by these surveys, it is now possible to calculate the wind energy at any place for which statistical data on annual wind speed is available. For example, the energy flowing during a year through the air layer below the one hundred and fifty metre level and over a two thousand kilometre strip of coastline west of Adelaide is 3.4 petawatthours, which is scientific shorthand for 3,400,000,000,000 kilowatthours. A line of large turbines in this zone could extract seven hundred terawatthours a year, that is 700,000,000,000 kilowatthours of electricity. These figures fall into better perspective when we note that the combined energy output of all the power stations in Australia, thermal and hydrel, in 1976 was only 70.3 terawatthours, which is about a tenth of the possible output of the two thousand kilometre strip of coast.

The obvious difficulty with solar energy, either as primary heat or secondary wind, is its variability. There are various ways of overcoming this difficulty, all of them complicated. One method, much discussed, is to use the wind-generated electricity to electrolyse ordinary water into its constituent gases, hydrogen and oxygen. The hydrogen then becomes a very useful fuel capable of being stored, but the oxygen would have a low value because of excess of supply greatly over demand. There is, however, a scheme in which both gases acquire a high value.

The process starts with coal and ends with normal petroleum refinery feedstock. The function of coal is to provide the necessary carbon and hydrogen in the form of carbon monoxide and straight hydrogen. These two gases are then led over suitable catalysts at moderate pressure and temperature to create by molecular recombinations a wide variety of new hydrocarbons, such as petroleum, methane, liquid-petroleum-gas (LPG), ethane/

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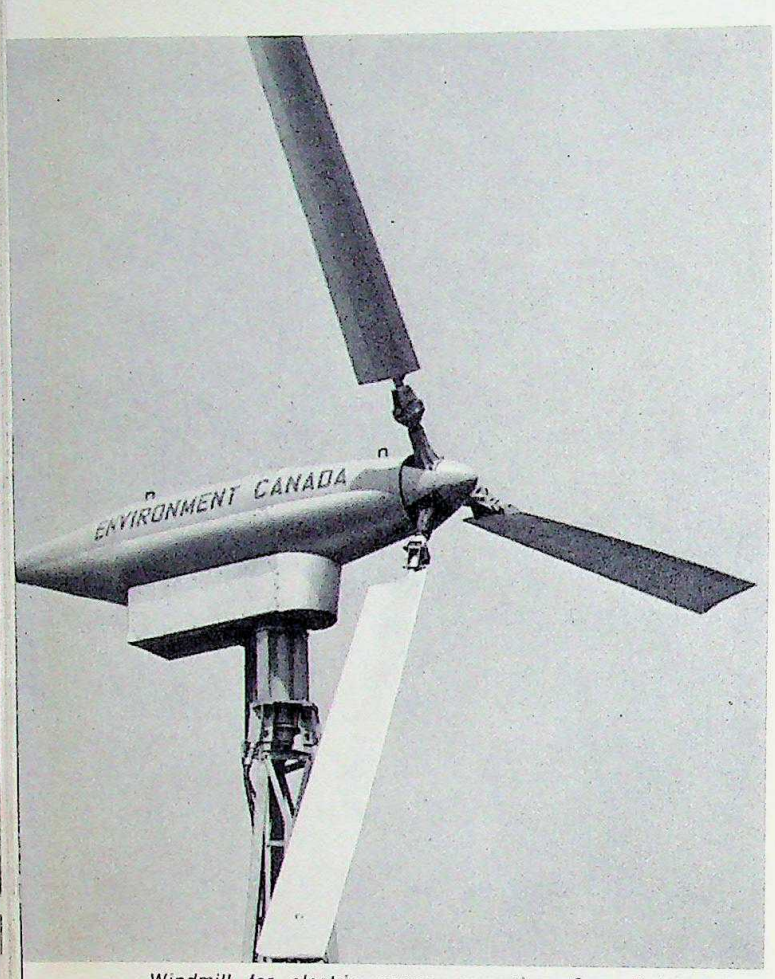
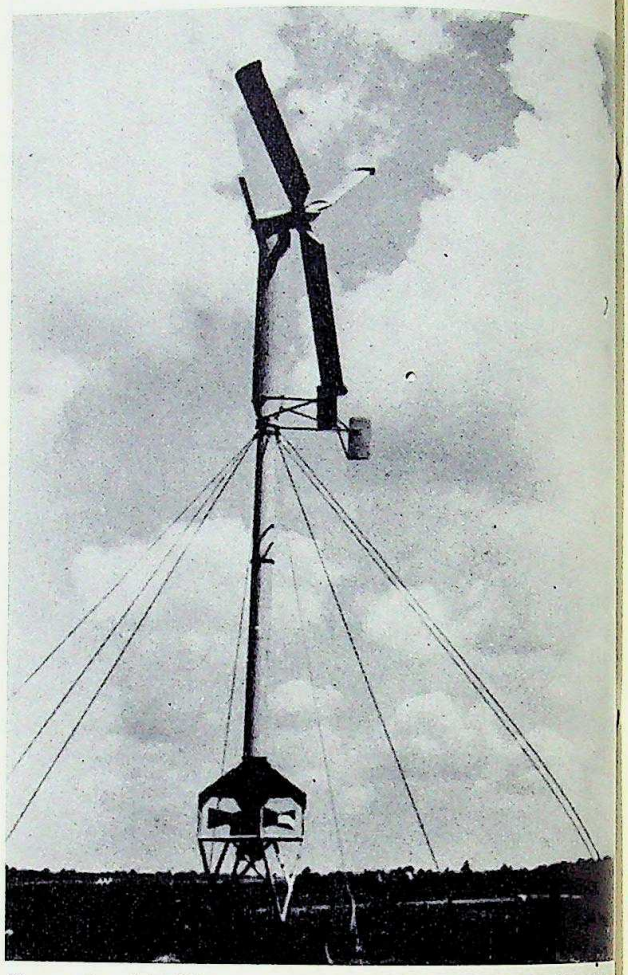
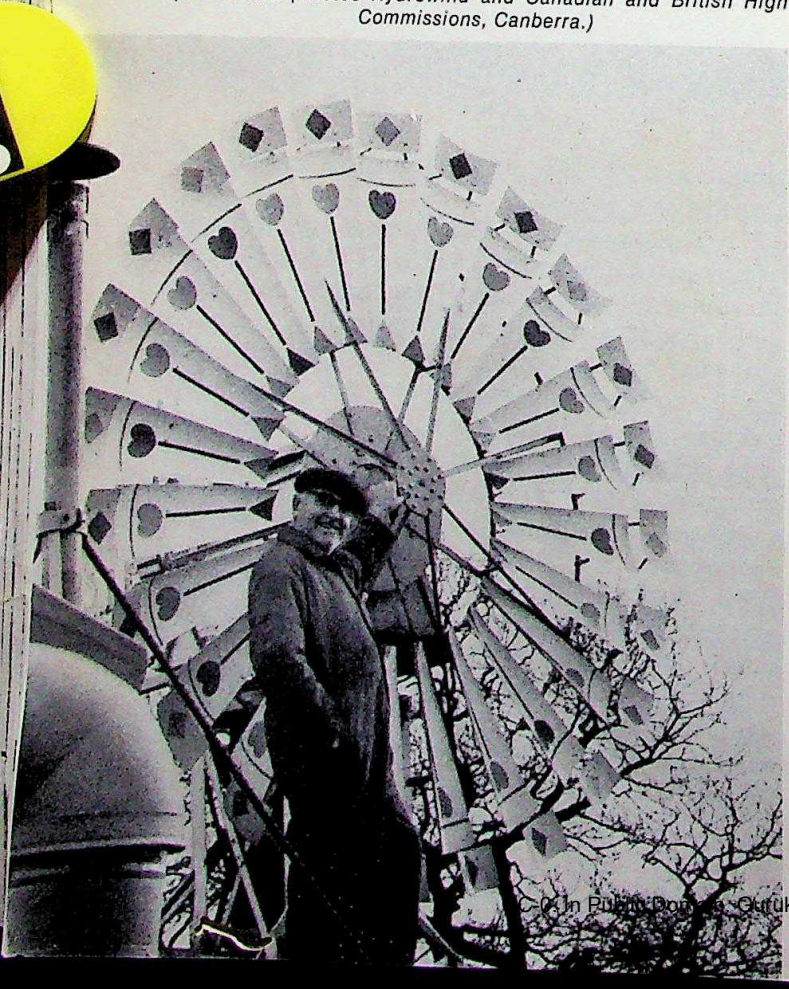
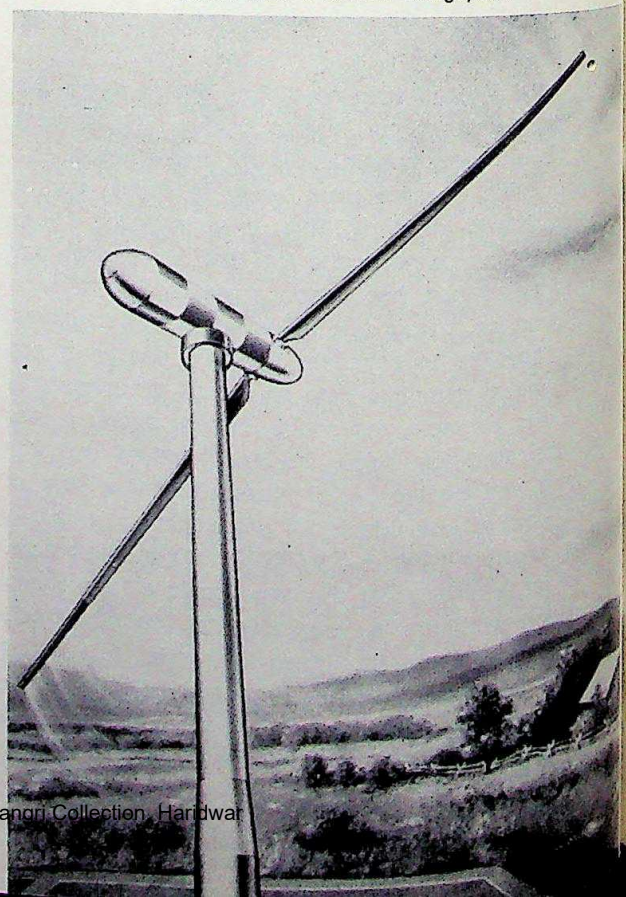


Windmill for electric power generation, Spry Point, Prince Edward Is., Canada, and a British chimney-sweep on the roof of his shed, in which his tools are powered by the five horse-power mill. (Photos Hydrowind and Canadian and British High Commissions, Canberra.)



Above: An eight kilowatt generator at Cranfield in Bedfordshire, Britain, and below, a sketch of a NASA windmill, of one hundred kilowatts, for Cleveland. It has been estimated that up to five or ten per cent of the total electrical power needs of the United States could be supplied by wind as of the year 2000. The tower, one hundred and twenty-five feet tall, carries rotor blades with a similar wingspan.





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ethylene, heavy oils, paraffin wax. This is the well-known Fischer-Tropsch synthetic oil process used extensively in Germany during the second world war.

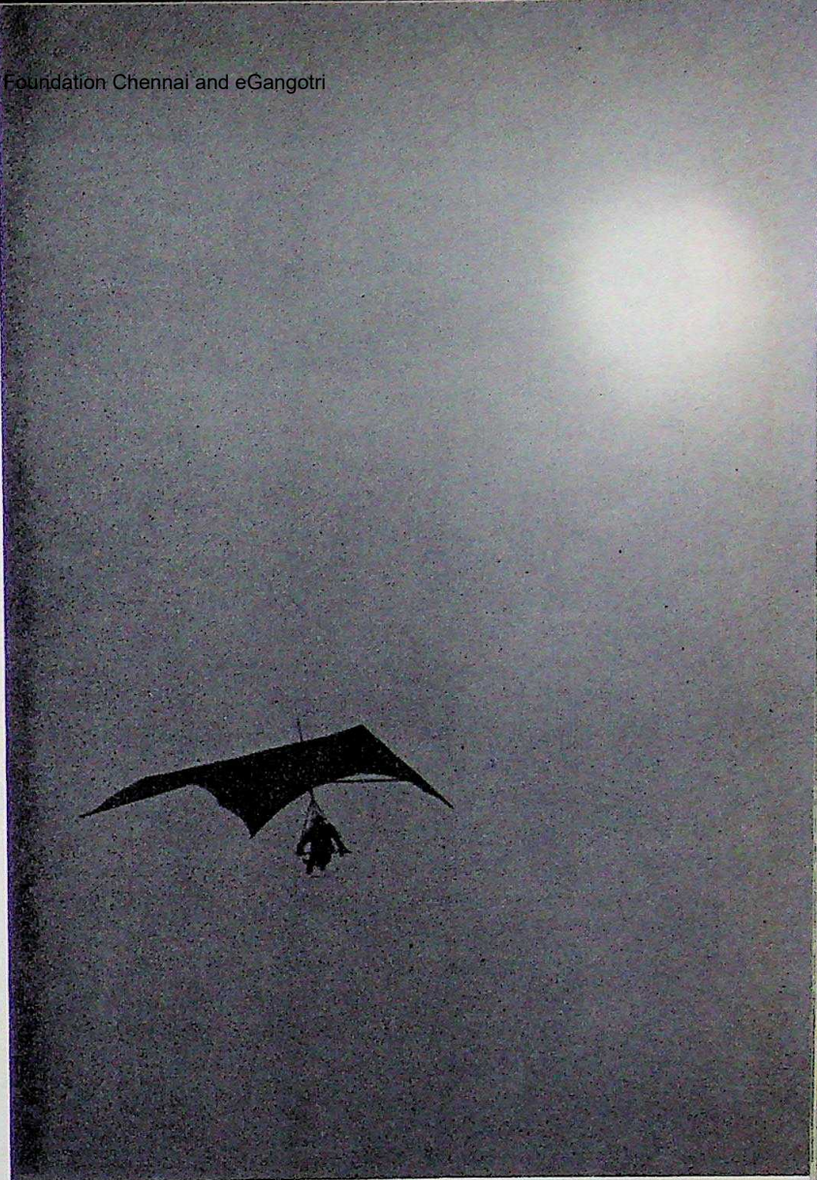
Coal, when partially combusted by being fed with straight oxygen after ignition, is converted to carbon monoxide and hydrogen. This is usually a very costly process because of the cost of oxygen. But our wind energy comes in at this point to provide free oxygen from the electrolytic hydrogen production. The whole process can be operated by *in situ* gasification which obviates mining coal and makes many coal seams, now considered useless because of depth or location, available for the manufacture of oil. South Australia has such coal beds and there must be many others elsewhere.

To recapitulate: Wind power is tapped to generate low cost electricity, which in turn is used to make hydrogen and oxygen from ordinary water. The hydrogen is a valuable fuel that can be fed straight to the thermal power stations; the oxygen goes to the coalfield where it converts the coal to gases for recombination to new hydrocarbons. The synthetic petroleum fraction goes to the refinery to provide precious fuel for transport and the other by-products, except LPG, also go to either the power stations as fuel, or into the natural gas pipeline. There is an important export market for LPG, which is also a very useful transport fuel.

Given the availability of coal, this use of wind energy in the coal to oil process has a number of advantages over the wind to electricity process. Much of the attractiveness of the second process derives from a vision of thousands of windmills, one for every home, all whirring away producing cheap electricity for daily domestic use. But nearly one kilowatt (or one and a half horsepower) is required to toast two slices of bread; a refrigerator uses a half kilowatt. Based on domestic uses such as these it is calculated that a windmill to drive a small turbine and generate electricity in any adequate amount would require a minimum annual mean wind speed of four metres per second. Field tests have shown that such wind speeds are rarely prevalent in an inhabited area. Houses, fences and vegetation interfere with free air movement and break wind speeds. Furthermore, man avoids very windy areas when setting up a habitation. Because good sites for wind turbines are generally inimical to life, including vegetation, we have an excellent indicator for site selection: an area that supports a natural mantle of vegetation taller than grass is almost certainly unsuitable for wind turbine installations.

The converse is also true: naturally bare places are nearly always excellent sites for tapping wind energy. Natural barrenness is usually a feature of high ground, so high ground is usually very windy. The high wind zone tracts of bare country on plains are ideal sites for the large scale harnessing of wind energy. Such areas are found on the southern littorals of Australia.

In all areas there is a diurnal variation in wind speed: the maximum wind nearly always occurs just after mid-



Hang-glider experts say that in such a sport a man is totally united with the wind. (Photo: Trevern Dawes.)

day and the minimum just after midnight. This means that at the time of the day when electricity is most needed for lighting there is least wind. For a small installation, storage is the obvious solution, but the cost of an electric accumulator large enough to bridge over wind interruptions of at least a week would be prohibitive.

Another problem arises from the rotation of the earth, which drives the atmosphere towards the east as it travels polewards. This results in the windiest zones lying beyond the thirtieth parallel in each hemisphere and the western regions of land masses being more favourable for wind energy exploitation than the eastern.

The designing of wind-driven turbines capable of generating energy on a large scale calls for sophisticated engineering. Small wind driven turbines have been used successfully for small jobs, such as pumping water, but it requires skills of a different order to design a machine capable of standing up to the storms that rage through a good wind site. The engineer has to tackle conflicting requirements: his machine must operate safely in very high wind speeds, and it must extract energy which is proportional to the cube of the wind speed.

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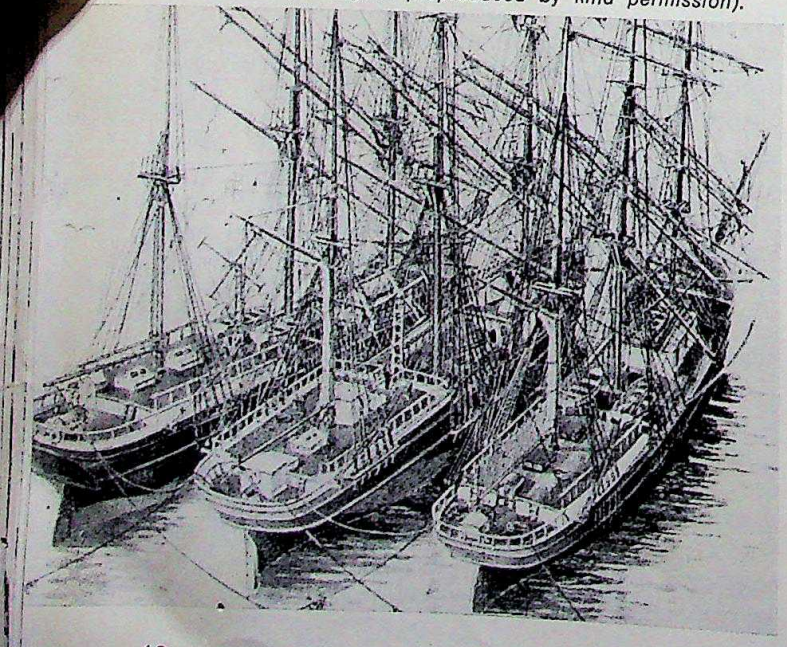
Pamir, *before her sinking in 1957, a frequent visitor to Australian ports, and one of the most beautiful four-masters afloat. (Photo taken in Sydney Harbour by Max Dupain).*

Below: Windmills were sometimes used in sailing vessels to 'man the pumps'. The mills can be seen aboard the two barques to the left of the illustration by Harold A. Underhill, author of Deep-Water Sail, *published by Brown, Son and Ferguson Ltd., Nautical, Glasgow. (Reproduced by kind permission).*



The windmills that ground corn for several centuries were safe but, by modern standards, inefficient. Several efforts made these past thirty years to build a large machine that is safe, and efficient in terms of kilowatts per dollar, have proved unsuccessful.

One reason for these failures is simply insufficient experience with large wind turbines, a 'large' machine being defined as one having a maximum power capacity in excess of a megawatt. The first such machine was the Smith-Putnam windmill built in Vermont, U.S.A., in the late 1940s. This machine with two eight tonne blades designed to achieve a maximum output of 1.25 megawatts in a 56 km/h wind, ran intermittently for a little over three years until one of the blades broke loose and was hurled several metres away. Two more machines of this size are presently under construction, one in Denmark the other in the U.S.A., and it remains to be seen how much has been learned from earlier failures.

Computer studies now show that there are no construction materials capable of withstanding the stresses to which the long cantilevered blades are subject. The two blades of the Smith-Putnam machine had a sweep

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circle of 57.5 metres; in order to achieve an output of fifty megawatts—such outputs are required efficiently to supply today's energy needs—blades with a sweep circle of one hundred and fifty metres would be required. Thus there is, on the one hand, a demand for bigger machines that can produce fifty megawatts, and on the other, the limitations of construction materials make it difficult, if not impossible, to build a machine capable of a maximum output of more than two megawatts.

In order to overcome this difficulty the author suggested, in 1954, a new device — a stiffening ring encircling the blades. The ring is given a high strength/weight ratio by bracing it like a bicycle wheel. The resultant windwheel is poised on two sets of rollers mounted on the spindles of the generators, with the drive taken through steel-to-steel adhesion to provide a high-ratio speed increasing device. The assembly is mounted on a circular railway.

A feature of this design, which was designated the 'captive-blade' system to distinguish it from the free-blade airscrew, is the high blade stability and the gyroscopic stiffness of the wheel. The machine is virtually indestructible because the blades are fully supported against windload; any overturning motion will convert to a yawing motion to take the machine out of the wind and into safety. Other advantages of this design are that it does away with the expensive and aerodynamically troublesome tower; the generator room is placed at ground level.

The captive blade design is likely to be test-modelled shortly. The target size is fifty megawatts in a wind speed of twenty-two metres per second averaged over the swept circle. Two large machines now under construction are rated at about thirteen metres per second for full load, a limitation imposed by the cantilever airscrew construction.

At the other end of the size scale is the small, village class machine, so called because it was especially designed to supply electricity to isolated villages. It was admirably suited for that purpose. A 7.5 kilowatt machine of the 1955 era probably represents the ultimate in design and performance. Three blades were used to damp out vibrations arising from the cyclic variations of wind thrust on each blade as it whirred around. Aerodynamic efficiency was high because of the combined use of thin blades running at high speed and automatic variable-pitch speed controls.

BOOK REVIEW

Conversion and Change

Cutlass and Crescent Moon: A Case Study in Social and Political Change in Outer Indonesia, by Douglas Miles; Centre of Asian Studies, University of Sydney; 160 pages.

Cutlass and Crescent Moon is a study of political and social change in the Upper Mentaya region of Central Kalimantan. In 1880, only a few itinerant Banjarese were reported as traders in the region. The entire population was noted as exclusively Dayak. Today, however, nearly half the population of this same area regards itself as Banjarese Malay. Since there has been no major immigration, Dr Miles' chief concern is to analyse the process of conversion by which Ngaju Dayak have become Banjarese Malays.

To put his study in historical perspective, Dr Miles considers traditional Dayak society, the effects of Dutch colonialism, the introduction of Christian mission education, the rise of Islamic nationalism, and the political manoeuverings of the immediate post-independence period. He emphasises the flexibility of Dayak social organisation, the heterogeneity of traditional religious practices, and the ease with which individuals resort to different sorts of spirits. All of this he considers as conducive to change and conversion. But he contrasts conversion to Christianity with that to Islam. Missionaries found that many Dayak readily converted to Christianity, but since this conversion was associated with being Dayak, and hence involved no social break with non-converts, Dayak readily reverted to their traditional ways. Conversion to Islam is, however, for the Dayak essentailly irreversible, since it involves a change in ethnic identity and thus a radical alteration of an individual's pattern of social relations.

For some time, Dayak have been migrating from their hill communities to larger villages down-stream. Opportunities for employment during the slack period of the agricultural cycle and better market access for jungle products provide good economic reasons for this migration. And it is in these larger villages and market centres that Dayak become Malays through conversion to Islam.

Dr Miles offers a vivid account of the context of Islamisation by focusing on the market centre of Kuala Karis, which seems, by its very composition, to display the process of change. Kuala Karis is composed of three sections: an old Banjarese core known simply as Kampong Banjar; a predominantly Muslim section known as Lewu Kahayan, consisting mainly of recent Dayak immigrants who now consider themselves Banjarese; and a smaller section known as Lewu Katingan composed entirely of non-Muslim Dayak. As conversion occurs, residents in Lewu Katingan move to either of the other sections of the village. Although Dayak life persists in Lewu Katingan, even down to the keeping of pigs, it is highly circumscribed. No Muslim will enter Lewu Katingan, and all village-wide activities, especially feasting which is necessary to the recruitment of agricultural labour, must conform to Islamic principles. Thus, for all, even the staunchest of traditional Dayak, settlement within a village entails an array of behavioural concessions to Islam.

This subtly argued book is not a simple study of economics or politics or religion but an attempt to integrate all these aspects of life in a total picture of a specific area. As such, it is in keeping with the finest traditions of social anthropology.

—JAMES J. FOX*

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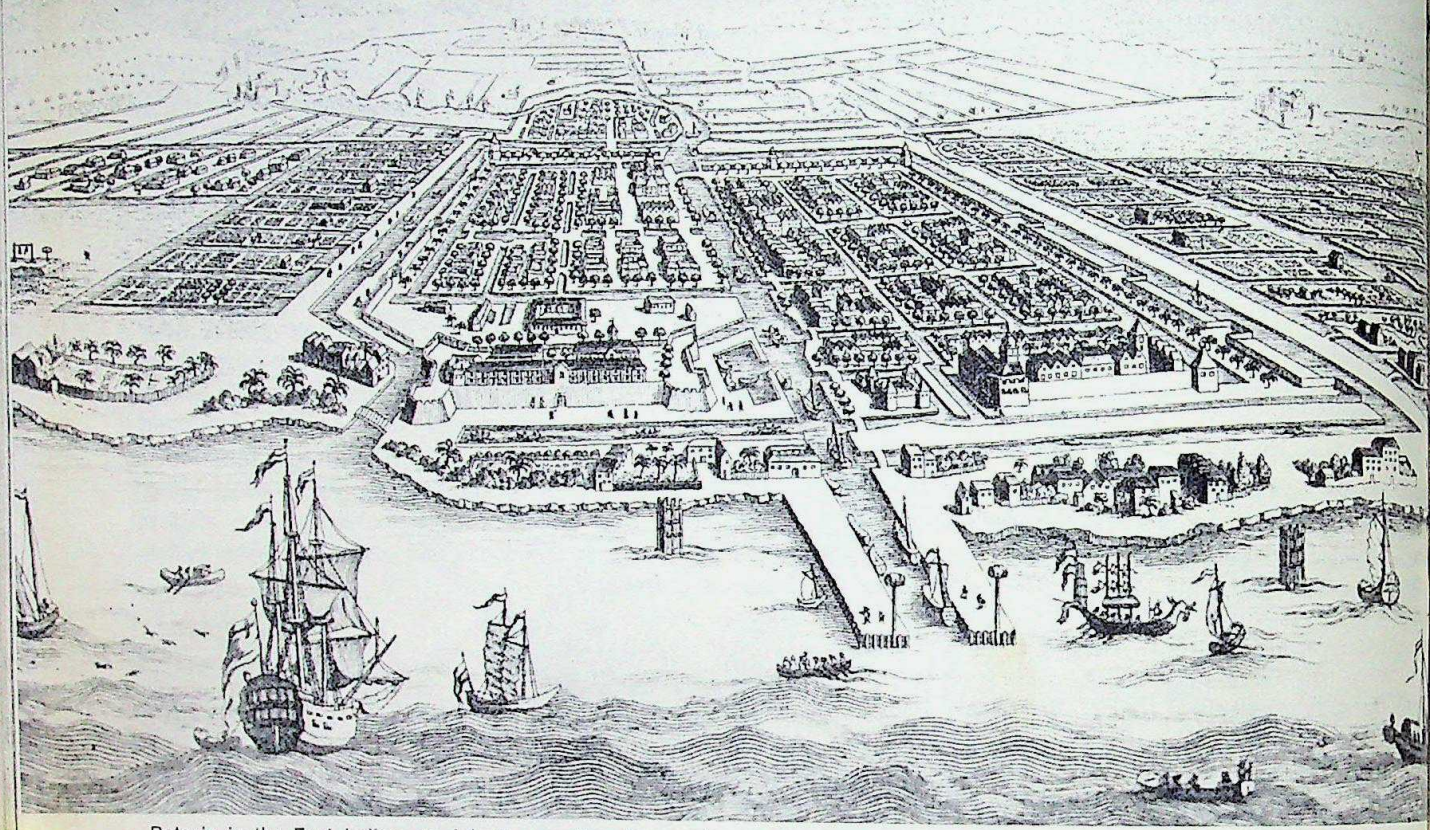

Batavia in the East Indies, *as Jakarta was then known, from* A New and Complete System of Geography, *London, 1793. (Courtesy Australian National Library).*

'THE BEST CHOSEN LANGUAGE'

D. J. Prentice

One of the major achievements of the Indonesian Government after Independence was to make *Bahasa Indonesia*, the Indonesian version of the *lingua franca* known generally as Malay, a national language in a country where different languages and dialects proliferated—as is to be expected in a nation of islands. This provided, not merely a means of communication between the people of Aceh, in North Sumatra and those of the island of Ambon to the east, but also gradually, probably helped to shape the thinking of the Indonesians and brought the unity in diversity, which is the country's motto, closer to achievement.

'Malay', no matter where it is spoken, has, no more than any other language, remained pure, but has shamelessly borrowed, as have French and English and German and Japanese and the Indian languages. Words are borrowed to describe something highly technical and new, or to express a concept that cannot be expressed in one's own language. (Examples of this are the universal borrowing of the German expression to denote a world-wide, total view, *Weltanschauung.)* On envelopes from Malaysia you find *Mel Udara;* from Indonesia, *Pos Udara*—one being taken from the British 'mail', the other from the Dutch. A quaint survival in Indonesia is the word *dokar,* used for a small cart with a canopy and fitted with seats for about four passengers; this is probably left over from the brief period when Raffles governed Indonesia and is a corruption of the English word for a small horse-drawn runabout, a 'dog-cart'.

In the following article, the author, Dr. D. J. Prentice, speaks of the importance of Malay as a language through the centuries and today, analyses its differing versions, and underlines its importance. Dr. Prentice spent four years working on the Malay-English Dictionary project at the Australian National University, and is now at the University of Leiden in The Netherlands.

The title is borrowed from Jane Austen: '. . . in short, only some work in which the most thorough knowledge of human nature, the happiest delineation of its varieties, the liveliest effusions of wit and humour are conveyed to the world in the best chosen language.'— Editor.

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With about six hundred languages in Papua New Guinea and upwards of three hundred and fifty languages in the Malaysia-Indonesia-Philippines area, the island region which links the two land-masses of Australia and Asia is the home of a quarter of the world's languages. If we include Australia itself, with its two hundred or so Aboriginal languages, the proportion is even higher. Of all these languages, the most important and the most widely used is (and has been for many centuries) Malay. Apart from fulfilling its role as the mother-tongue of millions of people, the Malay language has also developed a number of varieties which are used by non-Malay-speakers, among them a *lingua franca* which serves as the trade-language of the whole Malay Archipelago; and two standard forms which have been adopted as the national language in four states of South-East Asia (one in Indonesia, the other in Malaysia, Singapore and Brunei).

Malay is not, therefore, a monolithic language: it appears in many different forms and has many different functions. Indeed its heterogeneity is unrivalled except by the small group of European languages which have been spread across the world by the colonial powers. Malay has attained such a wide range of usage despite the fact that, in terms of numbers of native-speakers, it is by no means the most important language in its region. Thus, Javanese is spoken as a mother-tongue by more than fifty million people and Sundanese by twenty million people, whereas Malay and Tagalog each come a poor third with approximately fifteen million native-speakers. In order to understand how Malay has achieved its pre-eminent position, and why Malay, rather than any other language, was chosen as the national language over such a wide area, it is necessary to understand something of its history and background.

Throughout the Malay Peninsula (including the four southernmost provinces of Thailand), over most of Sumatra, and in the coastal regions of Borneo, one finds a bewildering mosaic of rural Malay dialects which, in minor aspects at least, differ from valley to valley, and even from village to village. Some of these dialects, such as Minangkabau and Kerinci, are so divergent that they are often treated as separate languages. It is said that the original home of a language is to be found in the area containing the greatest diversity of dialects, and that statement is as true for Malay as it is for English (compare the dialectal complexity in the small area of the British Isles with the homogeneity of English-speaking Australia). Sumatra and the Malay Peninsula constitute, in fact, the nucleus or core-area of Malay language and culture, while the Borneo dialects represent a later, though still very ancient, expansion.

That the need for a *lingua franca* should arise in an area blessed (or confounded) with such a multitude of languages is not surprising, especially as contacts between speakers of these and other languages became more frequent with the development of inter-island and overseas trade. That it was Malay which eventually filled that role is due to its strategic location on both sides of the Malacca Straits, a narrow body of water through which early maritime trade between India and China was perforce funnelled, and which provided a convenient half-way point at which to shelter from the monsoon or take on fresh food and water. During such enforced waits, the merchants (Indians, Chinese and, later, Arabs) would have to rely on trading with the Malay-speaking inhabitants for their supplies and would obviously need some means of communicating with them. Although history has left no record of the time when Malay first began to be used as a *lingua franca,* we know from the statements of Chinese scholars who visited the great Malay-speaking maritime empire of Srivijaya in the seventh century A.D. that a language referred to as *K'un-lun* was already in widespread use as a *lingua franca* at that period. It is almost certain that *K'un-lun* was a form of Malay. Certainly, by the time Europeans began penetrating into the area in the sixteenth century the Malay trade-language had spread to the Moluccas at the easternmost end of the Archipelago, while in the west it was known in the ports of India and Ceylon. From the records of the early European explorers we know that the trade-language which they encountered was very little different from the modern one, known in Malay as *Bahasa Melayu Pasar* ('market Malay'), and generally referred to in English as 'Bazaar Malay' or 'Low Malay'. It is basically a pidginised variant of the language, with a much simplified vocabulary, morphology and sentence-structure. Among the most salient features of Bazaar Malay is its use of the particles *punya* (to indicate possession), and *sama* (the functions of which are too complex to go into here). Thus the sentence 'He will give the cloth to his wife' would appear in Bazaar Malay as:

dia mau kasi itu kain sama dia punya bini
he will give the cloth to he poss. wife

whereas in the standard language it would be:

dia akan memberikan kain itu kepada isteri-nya
he will give cloth the to wife-his

The same European explorers and their crews brought with them another *lingua franca,* Portuguese Creole. This language, which had already established itself along the coasts of Africa and India, spread rapidly throughout the Archipelago wherever the Portuguese set up trading posts, becoming so well established in the process that even the later Dutch and English colonialists were obliged to use it in order to carry out their functions as administrators. For many years Portuguese Creole and Bazaar Malay existed side by side in uneasy rivalry in the coastal cities and ports of the Archipelago. In the end, however, Bazaar Malay retained its predominance and Portuguese Creole gradually all but disappeared: today, more than three hundred years after the departure of the Portuguese, it lingers on in the old city of Malacca, spoken by a community of some five thousand people of Eurasian descent.

In some areas Bazaar Malay itself became creolised; that is, it came to be used as the mother-tongue of

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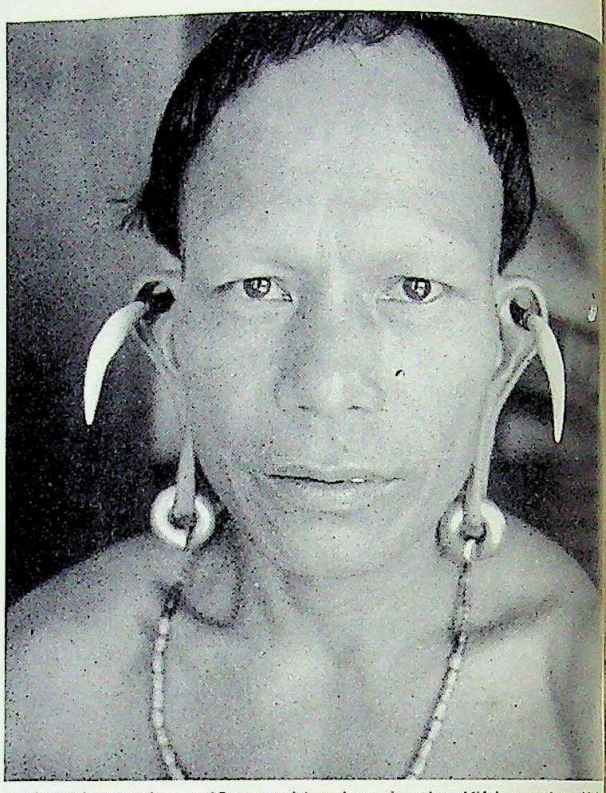
A rice planter in East Java.



A Kelabit headman (Sarawak) taken in the 'fifties, when Mal was spoken by only one man in the region, where now it widely spoken.

certain communities of people descended from mixed marriages, the partners of which had no other language in common. Thus, in the western part of the Archipelago, in the old Straits Settlements of Penang, Malacca and Singapore, the so-called 'Baba' dialect is spoken by descendants of people who were originally Chinese-speakers, while in the east (and possibly also in Jakarta) there are various types of Malay creoles which appear to be the result of marriages between speakers of Portuguese Creole and speakers of neighbouring regional languages.

The third stage in the expansion of Malay, its use as the language of literature and government, began in the empire of Srivijaya, which had its capital near Palembang in Sumatra. At its height, this empire ruled over most of what is now Malaysia and western Indonesia. It is known from Srivijayan stone inscriptions, dating from the end of the seventh century A.D., that Malay was by then in full use as the literary, administrative, religious and court language of the empire. These inscriptions, in a heavily Sanskritised Malay (termed 'Old Malay' by modern scholars), constitute the oldest written records in any Austronesian language. Slightly later inscriptions in a similar kind of Malay have been found in Java, indicating that Malay was also being used for official purposes outside the Malay-speaking area of the empire. The pattern of three main types of Malay (mother-tongue, *lingua franca,* and official language) which exists today was thus already established before A.D. 700.

When Islam arrived in the region in the thirteenth century, the paramountcy of Malay was so widely accepted that it was Malay rather than Arabic that serve as the vehicle for dissemination of the new religi throughout the Archipelago. After the fall of Sriv the tradition of using Malay as the court and litera language continued in other states which arose from ti to time: not only in states where that language w the mother-tongue of rulers and people (for exam Malacca), but also in states, such as Aceh, where was not. The period of the Malacca sultanate has oft been described as the 'Golden Age' of the Ma language, and the small number of texts which ha survived from this period certainly indicate a flourishi literary tradition. However, after Malacca was captur by the Portuguese in 1511, Malay entered a 'Dark Ag from which it has only just emerged, although the s tanate and the literary tradition asociated with it survive for some time in a very tenuous form in the Riau-Joho area. This is the origin of the the term 'Riau-Joho Malay', which is discussed later on.

By the eighteenth century, the Portuguese had be ousted from Malacca by the Dutch, who were in t coming into conflict with expanding British interests the area. After the Napoleonic wars, these conflicts we resolved by the Treaty of London (1824), under the ter of which a demarcation line was drawn separating t British and Dutch spheres of influence, which later b came the modern states of Malaysia and Indones respectively.

This decision, made by a group of long-forgott European diplomats sitting round a table many thousan of kilometres away, split the Malay-speaking world in

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two compartments, each subject to different political and linguistic influences, and was to result over a century later in the emergence of the two different standards referred to earlier.

In both the Dutch East Indies and the British-ruled territories, the language continued to be known by the generic term *Bahasa Melayu* ('Malay language') until the middle of this century. After Indonesia regained its independence in 1945, the term *Bahasa Melayu* for the standard language was rejected in favour of *Bahasa Indonesia* ('Indonesian language'), a name which had been in use among Indonesian nationalists since 1928. In the former British territories of Malaysia, Singapore and Brunei, however, *Bahasa Melayu* continues to be the normal way of referring to the standard language, alongside later official coinages such as *Bahasa Kebangsaan* ('national language'), which is still used in Singapore and Brunei, but which in Malaysia was replaced in 1969 by *Bahasa Malaysia* ('Malaysian language').

One result of these changes in nomenclature is that the term 'Malay' has lost its former universality. It has become common practice, when talking of the two standard varieties, to restrict 'Malay' to the Malaysian variety. But it cannot be seriously disputed that the standard variety used in Malaysia and that used in Indonesia are simply dialects of one and the same language. If the term 'Malay' is pre-empted for the former of the two varieties, what is one to call the language of which they are dialects?

It is to be hoped that as the term *Bahasa Malaysia* gains acceptance so will its English equivalent 'Malaysian', just as *Bahasa Indonesia* is now usually called 'Indonesian' in English. In this way 'Malay' can once more be used as the name of the language taken as a whole, while for the national variants one can use 'Indonesian' or 'Malaysian' (in preference to *Bahasa Indonesia,* etc., on the ground that one does not say: 'I'm learning Français' or 'He speaks Putonghua'; and certainly in preference to the distressingly common 'Bahasa', as in 'This letter is written in Bahasa').

For the sake of convenience, however, in the remainder of this article I will use the abbreviations 'BI' for the standard Malay used in Indonesia, and 'BM' for that used in Malaysia, Singapore and Brunei, reserving the term 'Malay' for referring to the language as a whole.

Before moving on to discuss the more recent developments in BM and BI, it is appropriate to examine the differences between them, many of which arose in the pre-independence period and are directly or indirectly attributable to the historical accident by which the Malay-speaking world was divided between the Dutch and British colonial empires. The most striking feature of these differences is that they are almost all to be found in the area of vocabulary. There are, of course, phonological, morphological and syntactic differences also, but they are neither numerous nor particularly significant. This situation therefore contrasts markedly with that prevailing between, say, American and British English, where differences in pronunciation are more conspicuous (compare, for example, the American and British pronunciations of such words as 'new', 'half', 'hot', 'laboratory', 'futile', 'better', 'centre/center', 'processes', etc.).

In the examples below, the following abbreviations are used (in addition to 'BI' and 'BM'): Ar., Arabic; Dut., Dutch; Eng., English; Jav., Javanese; Mal., Malay; Port., Portuguese; Sans., Sanskrit.

Kenyah schoolgirls in the Upper Baram, Sarawak, learning Malay.

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The most obvious lexical differences between BI and BM are those cases where BI has borrowed a Dutch word wh... BM has borrowed an English word to express a given meaning, thus:

	BI	BM
'bicycle'	*sepéda* (Dut. *velocipede* (obsolete))	*basikal* (Eng. *bicycle*)
'ticket'	*karcis* (Dut. *kaartjes* (plural))	*tikét* (Eng. *ticket*)
'suitcase'	*kopor* (Dut. *koffer*)	*bég* (Eng. *bag*)
'tyre'	*ban* (Dut. *band*)	*tayar* (Eng. *tyre*)
'fuse'	*sékréng* (Dut. *zekering*)	*fius* (Eng. *fuse*)

In many other instances, one of the two national variants has borrowed a word from the language of the Europea... power, while the other has retained an older word (sometimes itself an earlier borrowing) or created a new term o... its own:

	BI	BM
'tray'	*baki* (Dut. *bakje*)	*dulang* (Mal.)
'ice'	*és* (Dut. *ijs*)	*air batu* (Mal. *air* 'water + *batu* 'rock')
'cinema'	*bioskop* (Dut. *bioscoop*)	*panggung wayang* (Mal. *panggung* 'platform, stage, theatre' + *wayang* (from Jav.) 'shadow-play, film')
'towel'	*handuk* (Dut. *handdoek*)	*tuala* (Port. *tualha*)
'(motor) car'	*mobil* (Dut. *automobiel* (obsolete))	*keréta* (Port. *carreta* 'cart, carriage')
'file (of documents)'	*berkas* (Mal. 'bundle')	*fail* (Eng. *file*)
'licence'	*surat izin* (Mal. *surat* 'letter, document' + *izin* (from Ar.) 'permission')	*lésén* (Eng. *licence*)
'allowance (added to salary)'	*tunjangan* (Mal. 'support')	*elaun* (Eng. *allowance*)
'Christmas'	*Natal* (Port.)	*Kerismas* (Eng. *Christmas*)

There are a number of words in BI which have been borrowed from Javanese and other regional languages. In mos... cases, the original Malay word, which is usually retained in BM, continues to co-exist with the new acquisition i... BI also, with or without a change of meaning:

	BI	BM
'river'	*kali* (Jav.)	*sungai* (Mal.)
'village'	*désa* (Jav.)	*kampung* (Mal.)
'crowbar'	*linggis* (Jav.)	*alabangka* (Port., *alavanca*)
'shrimp-paste'	*terasi* (Jav. *trasi*)	*belacan* (Mal.)

Many differences result from BI and BM having independently created neologisms to express a given meaning:

	BI	BM
'examination (at school')'	*ujian* (from Mal. *-uji* 'to assay, test')	*peperéksaan* (from Mal. *-peréksa* (BM)/*-periksa* (BI) 'to examine, probe' (from Sans. *parīksā* 'examination, test'))
'blackboard'	*papan tulis* (Mal. *papan* 'board' + *-tulis* 'to write')	*papan hitam* (Mal. *papan* + *hitam* 'black')

Yet another type of variation occurs when both BI and BM share the same root but with minor phonetic change... (usually due to differing adaptations of a foreign word):

	BI	BM	
'snow'	*salju*	*salji*	(Ar. *thalj*)
'auction'	*lélang*	*lélong*	(Port. *leilão*)
'chair'	*kursi*	*kerusi*	(Ar. *kursi*)
'medicine'	*obat*	*ubat*	(Mal.; BI form possibly from Jav.)
'conscious'	*sadar*	*sedar*	(Mal.; BI form possibly from Minangkaba...

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Finally, there are a number of instances in which semantic change has led to a given Malay word having one meaning in BI and another in BM:

	BI	BM
senang	'happy' (= BM *senang hati, gembira*)	'easy' (= BI *mudah, gampang*)
-jemput	'meet, pick up (someone arriving at end of journey)' (= BM *-temui*)	'invite' (= BI *-undang*)
pantat	'bottom, rump' (= BM *punggung*)	'female genitalia' (= BI *nonok*)
pusing	'dizzy' (= BM *pening*)	'turn, revolve' (= BI *bélok, putar*)
kota	'town, city' (= BM *bandar*)	'fort' (= BI *bénténg*)
bandar	'port' (= BM *pelabuhan*)	'town, city' (= BI *kota*)

In considering such BI/BM contrasts as those just presented, several points need to be borne in mind. First, the range of usage of words labelled BI and BM does not necessarily correspond to the national boundaries, in that many BI words are used in parts of Malaysia and, conversely, many BM words in parts of Indonesia. Thus, BI *kamar* 'room' is common in Sabah, while BM *bilik* 'room' is common in northern Sumatra. Secondly, the influence of BI in the former British territories has always been strong and is increasing steadily, especially in the mass media and in films and novels. As a result, a great many BI words are at least recognised and understood in Malaysia, though the reverse is not usually the case. In the same way, most Australians and Britons understand such American words as 'railroad', 'elevator' and 'drugstore', whereas many Americans would not understand 'pram', 'fortnight' or 'maiden over'. Thirdly, and most importantly, the examples given above of contrasts between BI and BM tend to give a distorted picture of reality by concentrating on the differences rather than the similarities. In fact, the latter vastly outweigh the former, to such an extent that it is quite possible for an Indonesian or a Malaysian to write pages and pages of prose without once betraying his or her national origin. Nevertheless, the amount of divergence would undoubtedly have been greater were it not for the accident that the Anglo-Dutch line of demarcation ran right through the Riau-Johore area to which the court of Malacca had fled centuries earlier, with the result that the same literary heritage and tradition continued on both side of the line. Thus, it is often said that both BM and BI are based on 'Riau-Johore Malay', by which is meant, not the local dialect of Malay that is spoken in that region, but the literary Malay which represents the direct descendant of the language used in the court of the Malacca sultanate (that is, the language of the Malay classic *Sejarah Melayu*), and which continued to be used in the court of the Sultans of Riau and Johore.

The second part of this article will be published next month.

Brunei, Borneo, from Borneo and the Indian Archipelago, *by Frank S. Marryat, London, 1848. (Courtesy Australian National Library.)*

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'The Lovers,' the sketch by Sir Russell Drysdale, on which the poem is based, and which is reproduced by kind permission of the artist and the owner, Mrs Elizabeth Ryrie, of Sydney.

SKETCH FROM DRYSDALE

On the blond plain
A windmill frets at
The wave-blue range.

And where a bathtub floats
In mirage
Children play at boats.

Ah Nausicaa
Over what wine-dark mountains
Has Odysseus gone?

—DAVID CAMPBELL

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'THE SMALL RAIN...'

HUMID LANDSCAPES, by the Australian geographer Ian Douglas (ISBN 0 7081 0159 3), is the last to be published in the Australian National University Press series on 'An Introduction to Systematic Geomorphology'. It provides a fitting climax, marking a 'break with traditional approaches and to discuss humid landforms from the standpoint of the humid tropics'.

The work of running water in moulding land surfaces in fact extends backwards into an infinity of time and space: the 'Mariner' space vehicle recently documented water erosion on planet Mars that had begun billions of years ago. Aware that the ancient, relatively stable ecological systems of the tropics have been less affected by the legacies of past climatic changes than temperate lands, Professor Douglas acclaims the landforms of the humid tropics as the standard or 'type', and explains that it is not possible to develop an adequate theory of landform evolution through geological time from the study of present day humid landforms in temperate regions.

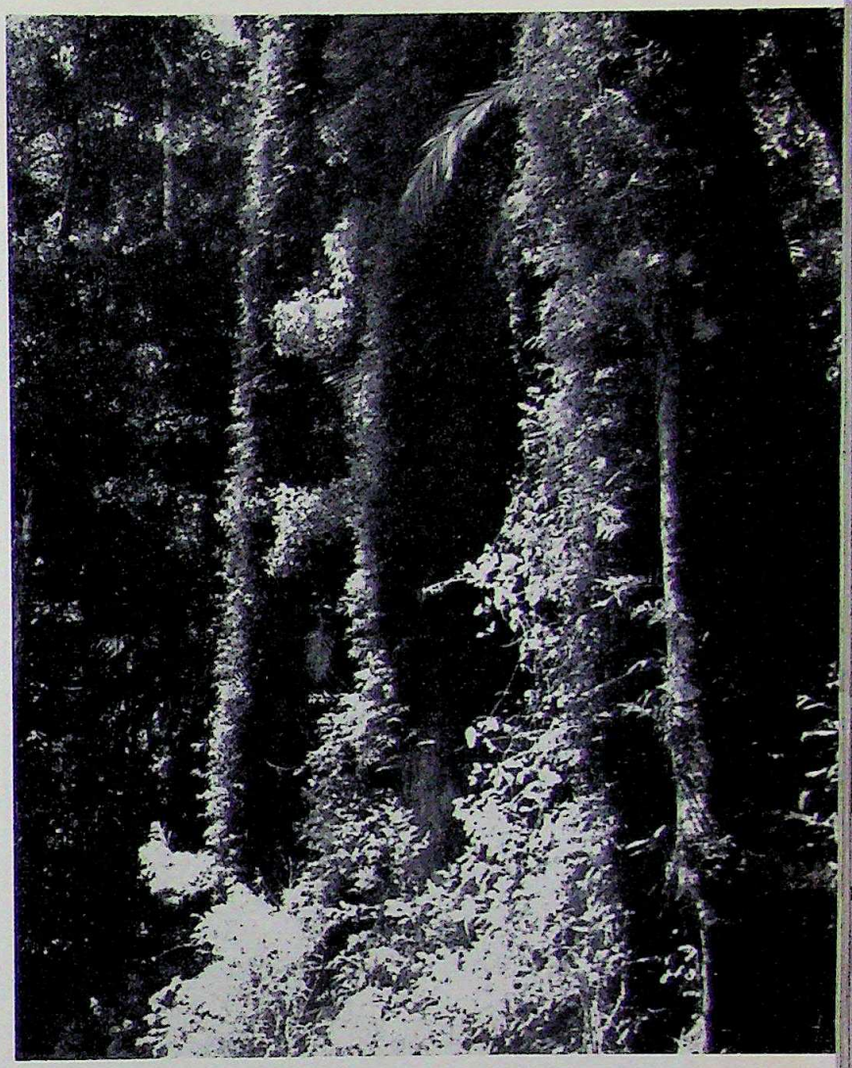
This realisation about the significance for science of the tropical *milieu* by a geographer has striking parallels in the fields of modern ecology, genetics, social anthropology and so forth. In the first comprehensive book on tropical rainforests published twenty-five years ago, the Cambridge ecologist Paul Richards stressed that existing botanical ideas were based far too much on the specialised flora of temperate regions. His colleague John Corner put it more strongly: 'I fear lest all the virgin lowland forest of the tropics may be destroyed before botany awakes'.

Professor Douglas's book indicates that the revelation has occurred for geographers in good time, and he is at pains to explain and explore the actual processes of creation and destruction of landforms in relation to the waxing and waning of rainforests, changes in forest hydrology, and biotic activities including those of man himself.

Time indeed is the essence of any general theory of landform explanation, and geomorphic time is to be understood as mixed and unequal, regular or irregular, such as drastic earthquakes or slow climatic change. Landscapes are the product of the dynamic balance between two major processes—those operating internally to roughen and uplift the land surface, and those operating externally — to smooth it by erosion and deposition, in humid tropical processes, much of the erosion is performed by frequent events of moderate magnitude, rather than by rare catastrophic events.

Professor Douglas uses the norm of humid tropical processes to present the four dimensions of length, breadth, depth and time of geomorphology in ten crisp, well-documented chapters. Time scales, he warns, range from tectonic events in the old Mesozoic Gondwanaland continent (Time Span 1 of millions of years), to Time Span 12 (weeks or even minutes), which may witness erosion cycles such as 'a brief youth of rapidly increasing relief, a maturity of strongest relief . . . and an indefinitely long old age of faint relief'. Or events may be rapid, such as 'brutal disruption' lasting a few minutes or a few weeks in the case of a landslide or alpine mudflow, or in the distortion of channel systems by floods and cyclones.

Everywhere there is the evidence of shape and pattern of river channels, of functional unity of drainage basins and valley forms, of hillslope components, and the more subtle record of terrestrial and marine deposits including pollen, fossils, charcoal and artefacts. Often the effects as seen today are of composite origin, with elements of different ages that require tedious dissection and working backwards in time. Vital evidence is often missing, so that



in 1971 Galloway exclaimed, 'it is painfully clear that we really know very little . . . we do not know if actual precipitaiton was more, about the same, or less'—in relation to late Quaternary cilmates in Australia.

Yet so rapidly has recent knowledge accumulated, that in 1976 Bowler and others in Australia were able to provide a closely reasoned but rather less pessimistic version of later Quaternary processes, a paper unfortunately not available when Professor Douglas wrote his book.

But comprehension of these grand processes, which move inexorably at such a diversity of time scales and distances from man, is not just an academic exercise, and is indeed essential for the successful use of the land. A waterfall tumbling into a gorge three hundred metres below is more than a scenic delight: it is a significant feature for the history of the surrounding landscape. So is a change in elevation of a metre or less in a delta or coastal plain.

Given the keys to geomorphological processes so clearly identified and illustrated in Professor Douglas's book, the student of the face of the earth can develop not only mental satisfaction, but also an applied knowledge to guide human modifications of the land, and especially of the fragile ecosystems of the humid tropics upon which so many people have come increasingly to rely.

—LEONARD WEBB*

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(Photo: Max Dup

CAGE, NO BARS

Scott Hender

'People are more lonely than they admit', someone wrote recently. Not in our street, of course. Recently, Australia were horrified to read that a woman had lain dead for a year in her house in Sydney without any of the neighbo realising it; some believed that she had gone into a nursing home, which she had told them was her intention. underline the isolation of the woman, a widow, among the letters unopened under the front door were only uncash cheques and bills and leaflets—not one letter from a friend or relative.

This case is only one of the many different ones that occur in living: hardship results, in many cases, from cro crowding and lack of privacy; in others, from isolation in the crowd. In *Hemisphere* (January 1978) and in the iss of November 1973 two different aspects of the problems were dealt with. Others will follow this article which deals m with the psychological side of the human state.— Editor.

MENTAL illnesses have many causes. For some, such as the schizophrenias and the severe disorders of mood, biochemical factors play an indisputedly important part, though the onset of these may be triggered by adverse experiences. In the case of neuroses, such as morbid anxiety, some types of depression, or the crippling phobias, biological causes are less prominent and un sirable experiences in the formative years are conside likely to be a principal cause.

Traditionally, psychiatrists have looked for the caus of mental illness under three rubrics: biological, includ genetically determined biochemical abnormalities in

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metabolism of the brain; intrapsychic causes, related to the psychological structure of the individual and the defense mechanisms he has grown to use to protect himself from emotional discomfort; and extrapersonal, or social causes, related to the characteristics of the social environment including the family.

Research on brain metabolism in the psychoses has made admirable progress in the last two decades, with gains being made in the understanding both of the schizophrenic group of illnesses and the severe disorders of mood, such as profound depression or excitement. Research on intrapsychic processes is particularly difficult. Measurement poses big problems here, because reliability is often poor and validation hard to establish.

Ever since John Snow demonstrated in London, in 1854, that the distribution of deaths from cholera was related to the type of water supply, it has been the practice of epidemiologists to scrutinise the environment for factors which may be causally related to illness, or conversely, to the preservation of health. In the National Health and Medical Research Council's recently established Social Psychiatry Research Unit at the Australian National University, an investigation is being conducted of factors in the social environment which may lead to an increase in mental illness on the one hand or, on the other, to protection against such disorders.

The term 'social environment' is a very general one. We have focused on one particular part of it with good reason. This is the degree to which an individual has ties, or bonds, with others in day-to-day life—his *primary group*. These bonds, we have hypothesised, are protective in the face of life stresses. The formulation of this proposition was prompted by three observations.

First, one was attracted to consider the domestic and social pattern in the contemporary Western world in the context of primate evolution. The anthropologists Lee and De Vore remind us that there has been cultural man for about two million years, during 99 per cent of which the species has lived as hunters and gatherers, moving about a large area of territory. Only in the last one per cent of man's evolutionary lifespan has he adopted an agricultural pattern of existence, remaining in one circumscribed area to grow crops. Only in the last two hundred and fifty years has he taken to an industrial pattern of living with striking movement of populations from rural to urban conditions. One began to see the importance of social bonds during the 99 per cent of man's existence when the brain apparatus was acquired for whatever behaviours would promote survival. Social bonds would have become essential in the behavioural repertoire of hunting and gathering groups under primeval conditions. Without such bonds, the group would not have formed in the first place. Yet the group as a form of living offered advantages for survival which could not have been relinquished. It is worth noting that these groups of early man were from twenty to fifty in number. Most of the individuals would have been kinsmen. For each, the presence of others of the same species became a major part of the immediate world. To be apart from the band for any length of time would have been highly dangerous. From interaction with others, these hominids were able to undertake activities possible only through co-operation. Such interaction also allowed confirmation of beliefs, including belief in one's own place in the band and one's self-esteem.

The development of the human mind had brought with it the emergence of mood, or the state of emotions. We postulated that for normal mood to be maintained, a minimum amount of input from social interaction became necessary. An analogy would be in diet; certain foodstuffs are essential; one can go for some days without them, but such a period of deprivation is limited before malnutrition starts. Similarly, we hypothesised, our species has a requirement for regular amounts of close social interaction. Of course such interaction is at times inimical, but the overall pattern is affectively pleasant. There is even evidence from studies of children and animals that affectively unpleasant interaction, such as scolding, or even physical punishment, is preferred to complete isolation.

In contemporary life, whatever the culture, social bonds are ubiquitous. The distinguished anthropologist Malinowski noted that the family is a universal phenomenon. It is within the family that social bonds are strongest, being based on both affection and obligation.

The second observation was based on the work of John Bowlby at the Tavistock Institute in London. His study of the phenomenon of attachment has focused mainly on the bond between an infant and mother though he recognised that

> 'human beings of all ages are at their happiest and most effective when they are confident that there are one or more trusted persons behind them who will come to their aid should difficulties arise.'

We thought that we were picking up here the same observation made by anthropologists, that social bonds are universal and that they have an important functional role. Attachment between adults is as noteworthy a behavioural phenomenon as that between mothers and infants. It is the basis of family life and of marriage in particular. Like few other primates, humans have a strong tendency to form an enduring and affectionally strong bond with one other person, usually of the opposite sex. This is the basis of marriage. Affection can be very powerful even in the arranged marriages of non-Western cultures. As one G/wi hunter from Bechuanaland remarked of his late wife, 'She wasn't as pretty as some, but I shall cry for her until I die'. Another man from the same tribe is quoted by Silberbauer as saying, 'A wife pulls a man's heart straight to her, even though he doesn't know where she is, but just walks, his heart knows the direction and he will find her spoor'.

We formed the idea that there is a range of intensity in social bonds, and that the intensity may be on more than one dimension. Clearly, attachment is one of these, and obligation another. The two may be independent: one may have considerable obligation to a kinsman, but no attachment.

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A third observation was from the work with psychiatric patients. In the Professorial Psychiatric Unit at the Royal Hobart Hospital, we formed the impression that a large proportion of patients had, in addition to their symptoms, a conspicuous deficiency in close social bonds. They might live in real isolation, seeing few people in anything but the most superficial transactions; or they might be married but obtain only distant recognition from the spouse, certainly not expressions of interest, liking or affection. This led us to postulate that for many the symptoms of deviant behaviour were 'care-eliciting'. That is, it tended to restore for that individual expressions of interest or affection from those around. For some, such supplies were obtainable only from professionals, such as general practitioners, hence the tendency for such persons to embark on an episode of illness behaviour, with physical symptoms out of proportion to the medical disorder itself. For many, being depressed or suicidal or having multiple physical complaints is an effective way to ensure supplies of care and attention which are otherwise available in their social environment.

My colleagues and I see in the area of social bonds a support networks an issue deserving the closest attent If it were possible to demonstrate conclusively that deficiency of social bonds is a causal factor of substan importance in mental illness, the implications would considerable.

Throughout the Western world, and now in many ar of Africa, Asia and South America, family ties have come less strong over the last half century. Rural-urb migration has meant the weakening of such bonds many countries. Traditional patterns of family life a changing towards the more free but infinitely m precarious nuclear arrangement adopted by the West.

Depression, states of morbid anxiety and psychoge somatic symtoms all seem to be related frequently to deficiency in close affectional bonds. Recently, two furth groups of deviant behaviour have become promine Abuse of alcohol and other drugs, including analgesic is endemic in the suburbs of Australasia, usually to b found when individuals have failed to find satisfacto relationships with their closest family members. Th second phenomenon is 'non-accidental injury of childre sometimes called baby-bashing. Very commonly, this found in a family where either or both parents are notab lacking in support from close ties, either with each oth nearby kin or friends. The exasperated mother, imprison in the home with a small child and conspicuously lacki in interaction with other adults, develops a dangerous low threshold for exploding into violence. sometimes th result is fatal, or the infant grows up epileptic or menta retarded. We would claim that whatever the other facto in the multiple causation of such behaviour, the absen of close social ties is likely to be an important contrib tion. Child abuse is thought to be extremly rare in th non-Western world, where mothers have other women around them all the time to share in child care.

In no sense, though, can social bond deficiency seen as prevalent only in the Western world. At a rece World Health Organisation seminar on the epidemiolo of mental illness in South-East Asia, delegates from nea all the member countries spoke of the breakdown of t extended family system as the greatest threat to men health in the region. These macrosocial changes a having an effect on the way individuals conduct thei lives.

One can identify without much difficulty typical rep sentatives of those groups in the general population w are likely to be deficient in social bonds: the stude entering college, particularly if he has left home for t first time; the mother at home with a young child, depri of ready contact with her own mother or establish

Shared living is a way of life for people of Chinese origin block of apartments in the Causeway Bay area of Hong Ko (Photo: Camera Press, London.)

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friends; the recently bereaved; and the elderly. In all instances, there is good epidemiological evidence that illness rates are increased, often accompanied by an increased rate of consulting general practitioners.

Firstly, we really must find out what kind of bond is most important in preventing people from becoming ill. Is it the close affectional bond, such as exists between spouses (at least from time to time); or is it the social bond one has with other kin or with friends or work associates. Furthermore, we need to know if the one kind of bond can be effectively replaced by another: can friends make up for a lost spouse?

At the present stage of our knowledge about the social environment, it seems reasonable to propose the following: Just as one should not smoke, nor overeat, nor lead a sedentary life, so one should recognise that maintaining mutually satisfying relationships with others is an important contribution to one's own health, and to others.

This means that one should conduct one's life having adequate time to spend with those whom one values highly—one's immediate family and friends. This will be a wise investment when, as inevitably happens to most people, some calamity strikes. One's close relationships should be recognised as one's most valuable assets, surpassing any property or other material acquisitions. In the interests of a country's health, it would be wise to promote this outlook as an exercise in preventive medicine.

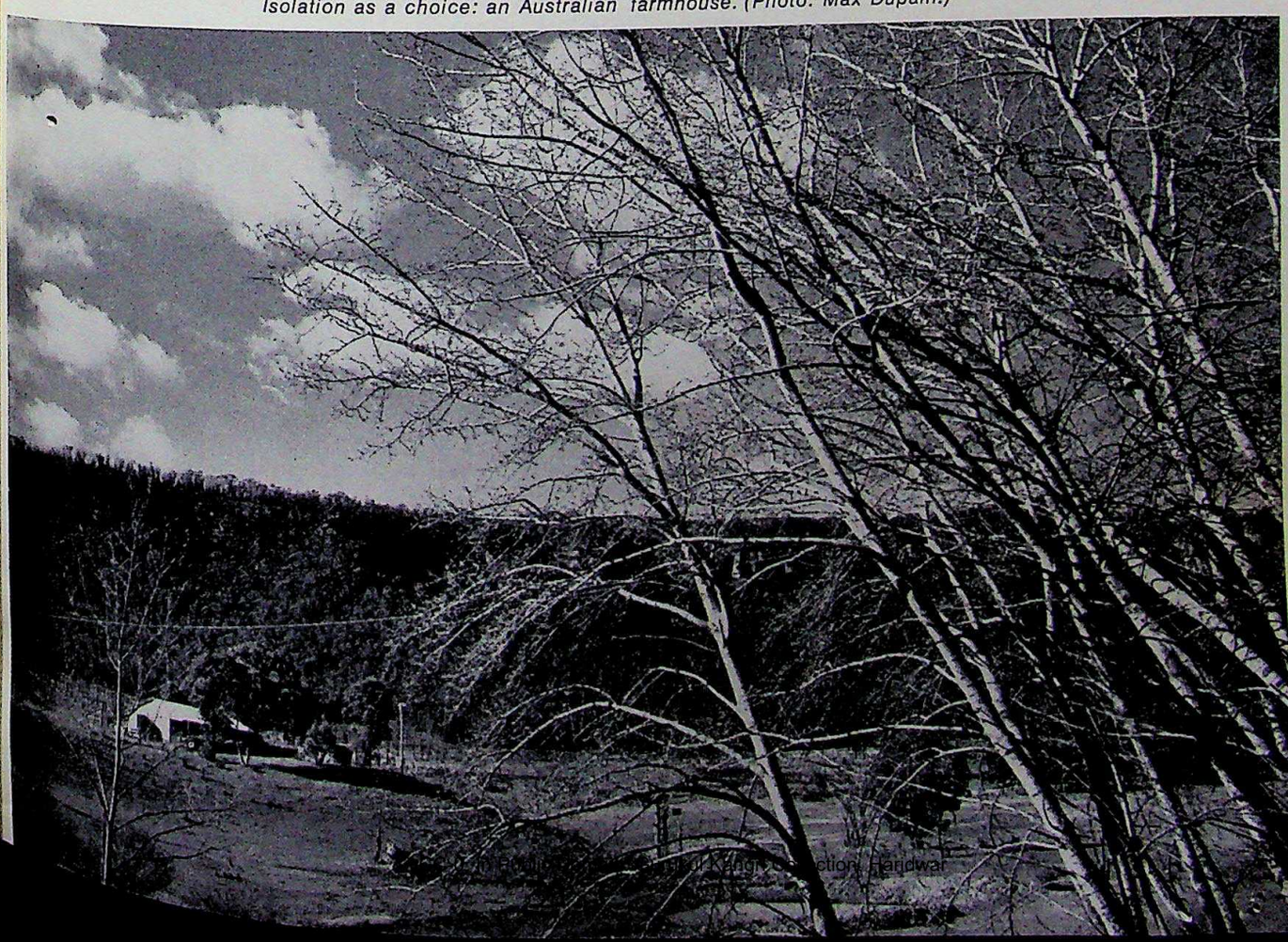
Vulnerable groups in the community, such as housebound mothers and the elderly, should be encouraged personally to put effort into maintaining whatever satisfying social ties they have available.

In the second place, there are also implications for policy formulation. Within the helping professions and within medicine in particular, there is now every need to tidy up the support-giving functions. The latter include general practitioners, nurses and physicians, as well as social workers. Since all are frequently called upon, explicitly or by implication, to give or to arrange for the provision of support, it would be exceptionally useful if there were clear guidelines available for determining who needs support and how it can most effectively be obtained. The initiative of the individual in need should at all times be used to the full.

I have attempted to give some of the background to current epidemiological work which points to a hitherto neglected component of the environment—those around one in day-to-day life. To perform effectively and to maintain health, there is good reason to think that people must have others around them. The behavioural apparatus acquired during several million years of primate evolution allows for remarkable adaptability in our species. Whatever the environment, though, it seems that people need people.

THE AUTHOR: *Dr Scott Henderson is Director of the National Health and Medical Research Council in the Social Psychiatry Research Unit at the Australian National University.*

Isolation as a choice: an Australian farmhouse. (Photo: Max Dupain.)



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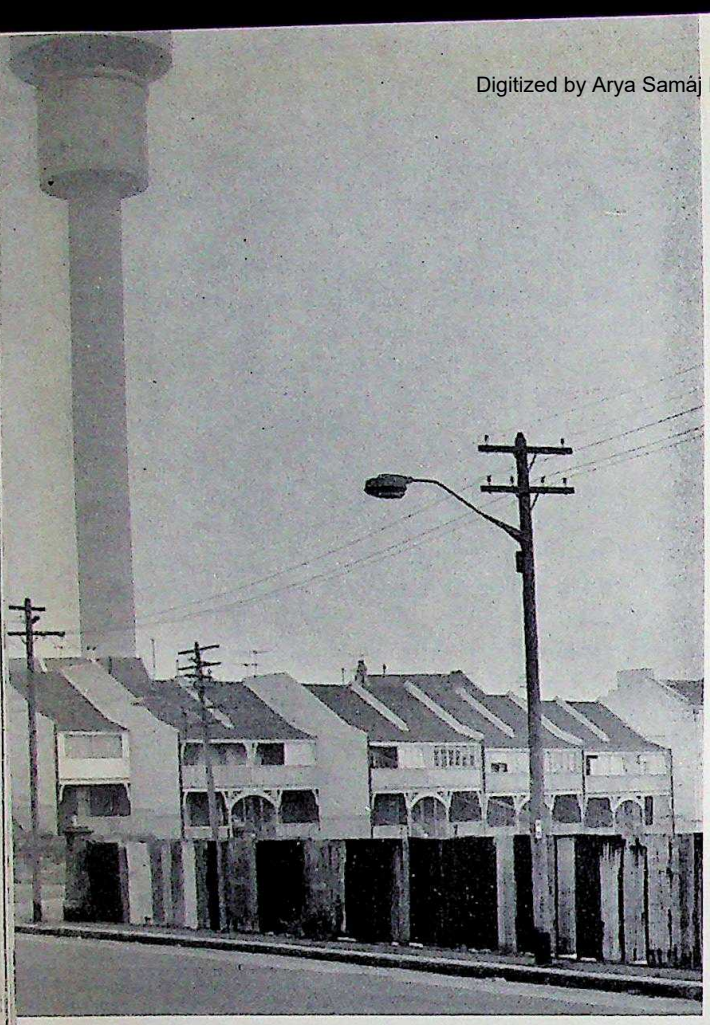

UNDER TWENTY

Photographs by people under twenty when they were take
and exhibited at the Australian Centre for Photograph
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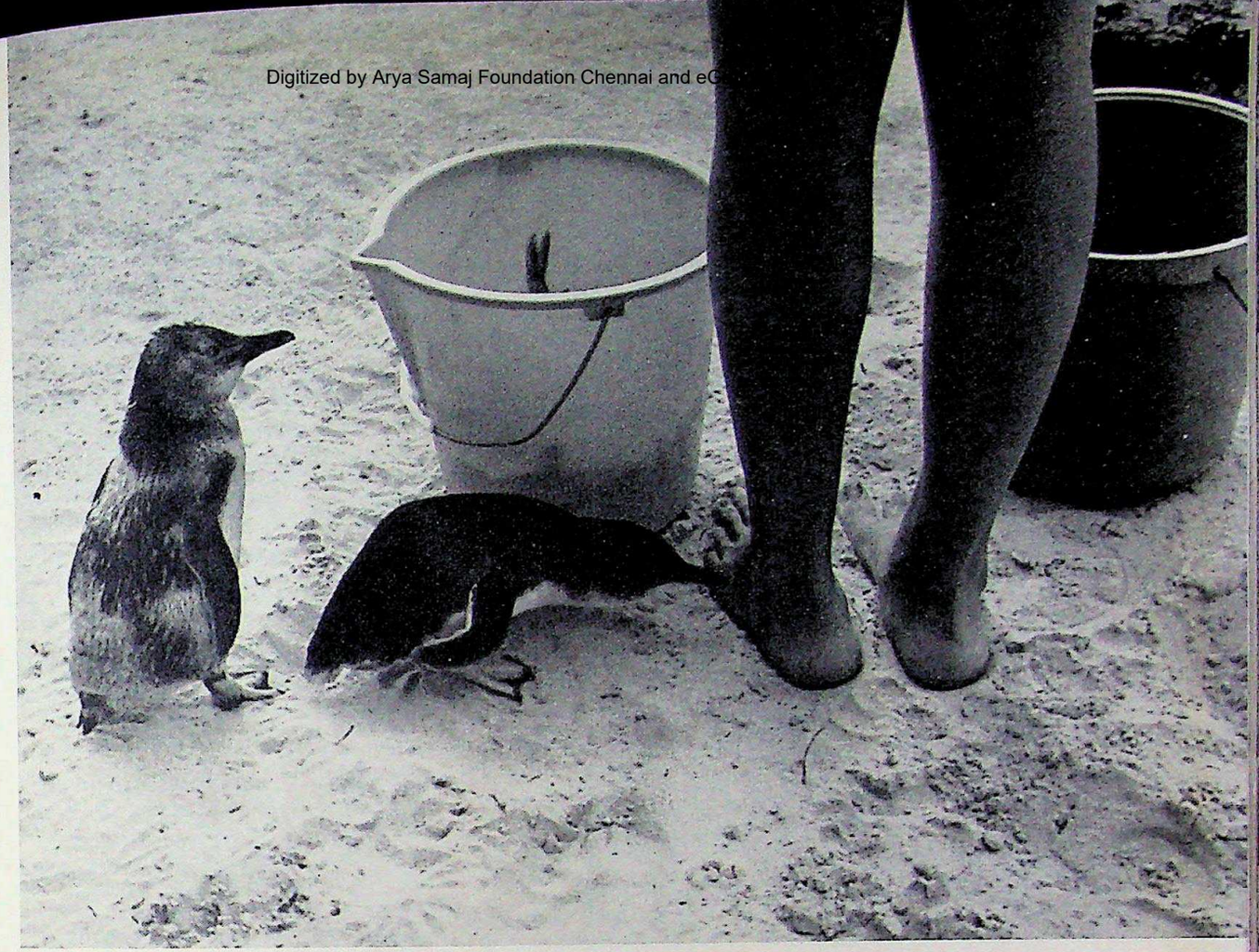
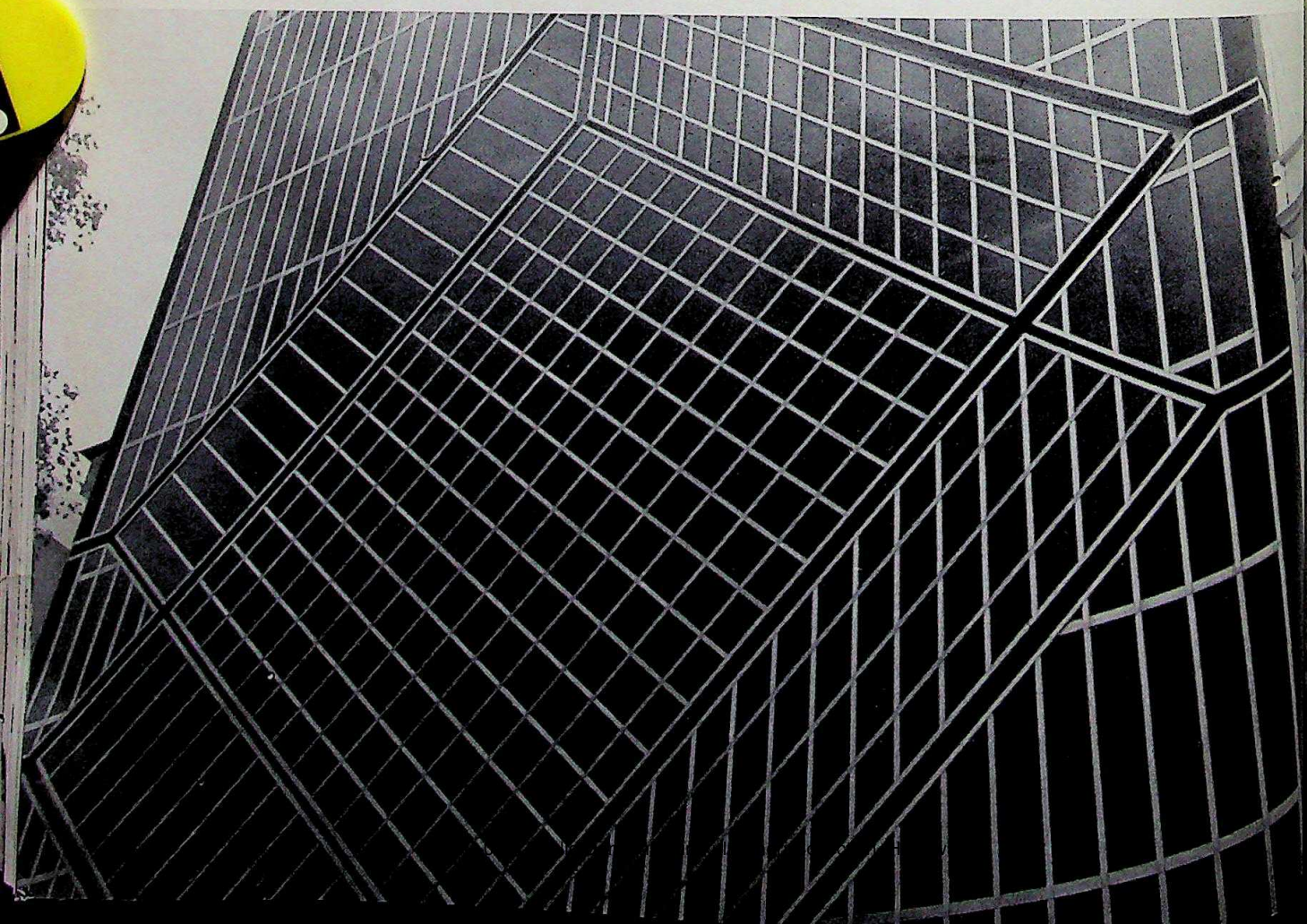


Opposite, top: City Scene, by Geoff Bevins; opposite, below and above, this page: Trampoline and Beach Scene, by Philip Hayne; below: another view of Sydney, by Christina Boyd. Page 32: Checking on the Rain, by Dave Mapletoft, and Facade, by Barbara Eordorch.

Samaj Foundation Chennai and eGangotri



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CROWDING IN

Asian Urbanisation: A Hong Kong Casebook, edited by D. J. Dwyer; Hong Kong University Press, distributed by Oxford University Press outside Hong Kong, 1971; 201 pages.

THIS book represents a compilation of papers presented to a seminar on problems of urbanisation in Hong Kong in 1968, plus several other papers on the same theme solicited by the editor shortly thereafter. Because of the lengthy delay in publication (the date provided belies the actual appearance of the book), most of the contributions are now historical documents. Hong Kong's population is growing consistently at around 2 per cent per annum, and, as a measure of change in physical environment, 5 per cent of the existing floor area is added as new buildings each year. Despite the time lag between preparation of papers, and their appearance in book form, a few contributions raise questions that are still largely unresearched and which remain important to Hong Kong's development.

There are eight contributors. The editor, D. J. Dwyer, has written an informative introduction and two papers, one on the provision of housing in Hong Kong and the other on the problems of the small industrial unit. The theme of housing and transport predominates. C. K. Leung discusses the growth of public transport, uniquely owned and operated by private enterprise, and details the importance of mass transport to Hong Kong. Leung laments the possible scaling down of the mass transit system, which did indeed occur. However, in the context of the relative paucity of mass transit systems in other cities, Hong Kong should be well pleased to have one at all. J. A. Prescott emphasises this point by way of his contribution on the significance of high density urban form and the possibility this offers for organisation through, and around, mass transit systems. Until the oil crisis of 1973 the private car population was increasing at the rate of 13 per cent per annum, helping to make Hong Kong's traffic ways, in addition to its population, the most crowded in the world. The transport problem is again raised in a paper on the development of new towns by J. M. Wigglesworth. Here the discussion is focused on the four development areas, all of which are now either under way or completed. Wigglesworth has perceived that an important problem of new town development is that, in re-location of families, disruption can occur which decreases access to both physical and psychological resources, the latter including contact with family and friends.

Two intimately related aspects of the housing problem in Hong Kong are resettlement housing, dealt with in a paper by P. Bishop, and squatter housing, discussed in the context of an in-depth study of a particular squatter area by L. S. K. Wong. The public housing program, which by 1970 had housed one million six hundred thousand people, had begun in 1954 largely as a means of removing squatter settlements. In 1975 there were still about three hundred thousand squatters and their presence was, at that time, being viewed through less critical eyes. One of the questions raised by both Wong and Bishop was whether health and well-being improved for squatters move to resettlement estates. In fact, a Hong Kong human ecology program conducted by the Australian National University between 1974 and 1976 provided evidence that squatters are, in some biological ways, better off than resettlement dwellers. A paper by E. G. Pryor on the delineation of blighted areas in urban Hong Kong concentrates exclusively on physical conditions from a Western planner's point of view and excludes any consideration of the biological response of inhabitants to the range of life conditions documented.

D. M. E. Evans contributes a paper on the legal aspects of urbanisation in Hong Kong, the salient point of which is that the Hong Kong government has wide powers to resume land for development. Although it exercises this power freely, local political considerations frequently oblige it to provide considerable benefit to dispossessed land-owners.

Finally, D. W. Drakakis-Smith raises interesting questions about the form of development of the urban hinterland in Hong Kong. He observes that the ratio of towns to villages is midway between that existing in the Chinese and English situation. He finds also that the new towns and rural villages of the new territories in Hong Kong are remarkably self-contained, subscribing little to the services provided by the large urban areas of Kowloon and Hong Kong.

This book will not provide the reader with an accurate vision of Hong Kong as it is today. Most of the developments which the contributors have predicted have already occurred, and the problems foreseen have either passed or exist still but with new faces. Indeed, it is in the descriptive historical nature of this book that the greatest value lies for the contemporary scholar of Hong Kong or of Asian urbanisation in general.

—KEN NEWCOMBE*

* *Ken Newcombe is a Research Fellow in the Human Ecology Group, Centre for Resource and Environmental Studies, Australian National University.*

NO CORNERS CUT as the publisher says of Yohanni Johns' Cookbook *(Dishes from Indonesia,* Nelson, ISBN 0 17 005206 0).

This is a new version of Yohanni Johns' first cookbook of Indonesian food, beautifully illustrated, and with metric measures to help make Indonesian cooking international.

The dish shown is stir-fried mixed vegetables with chicken and prawns *(Cap chay goreng)* — a rich mixture of cauliflower, carrots, peas, mushrooms, celeriac, chicken, prawns, onion, garlic, ginger . . .

The only criticism of such a book is that it's too good to be taken into the average kitchen, so the recipes should be memorised in the living-room and then carried to the hot stove.

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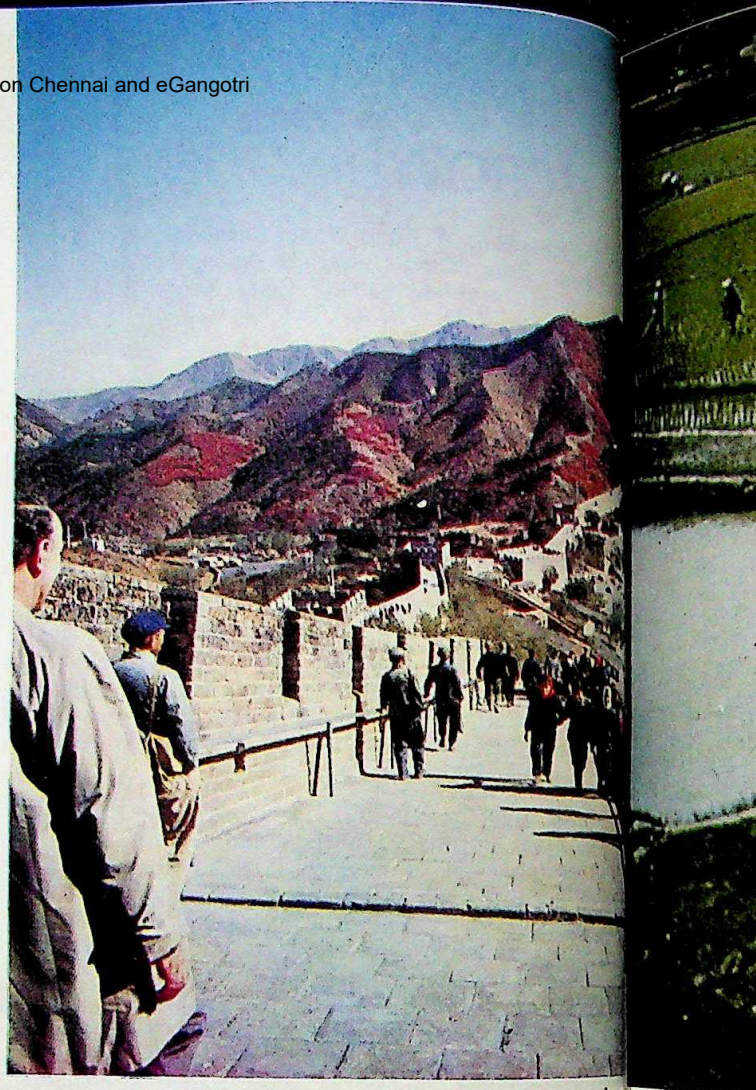
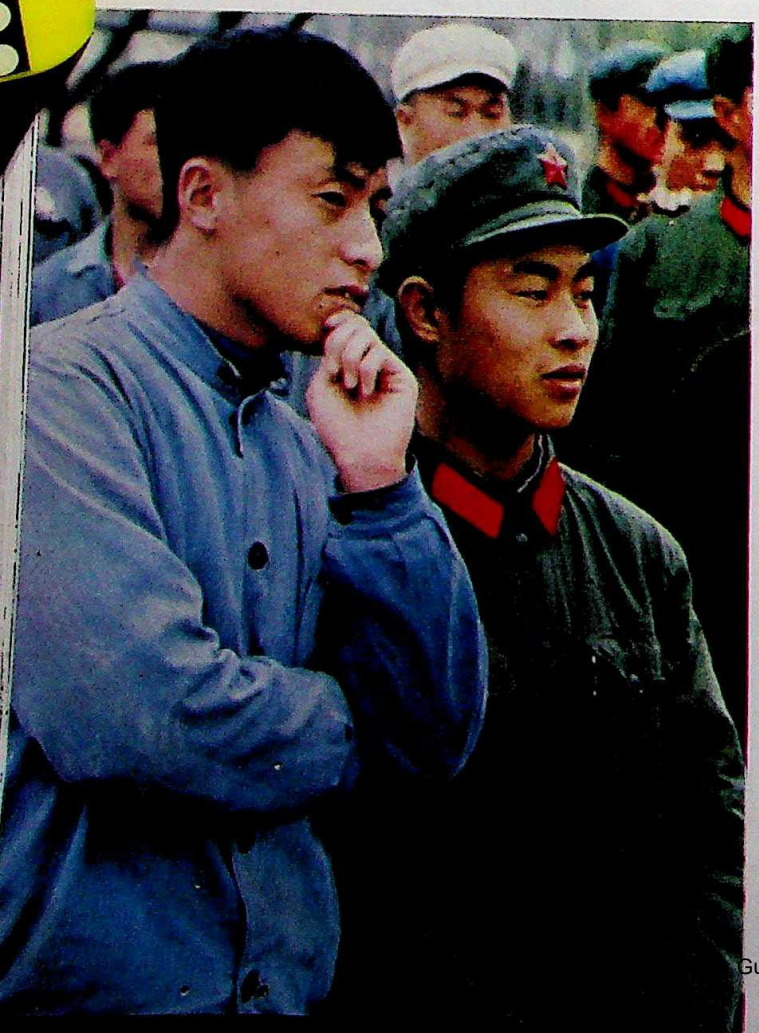
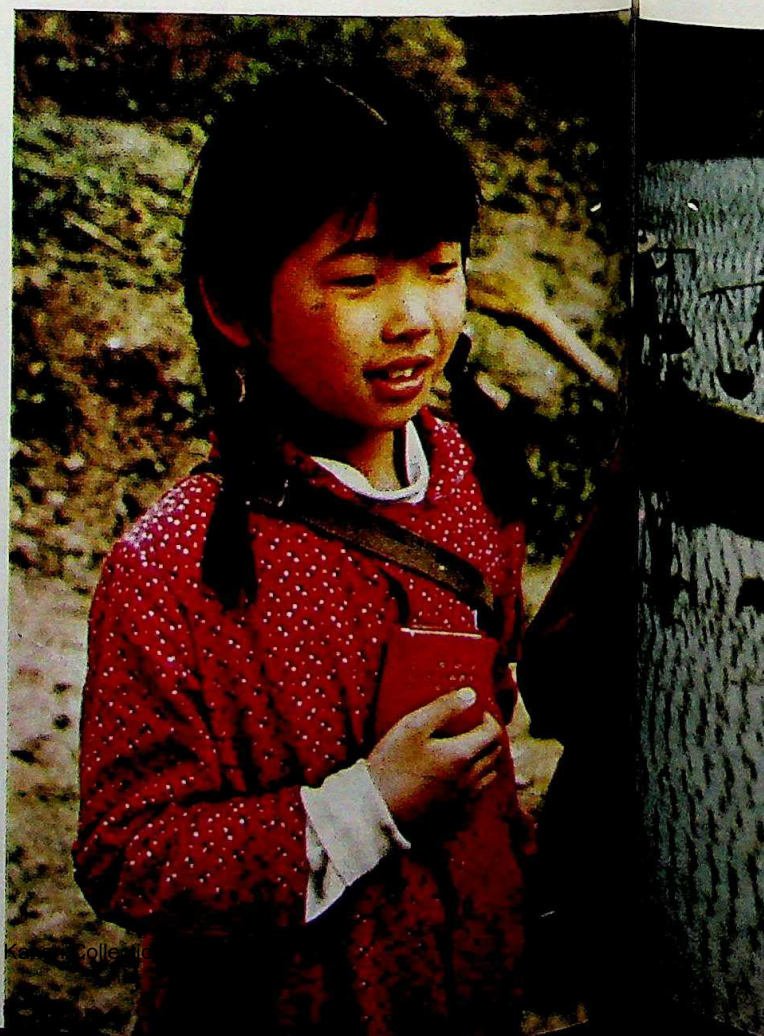
CHINA AS IT IS AND AS IT WAS

Photographs by Frank Fischbeck and Val Foreman







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AS IT WAS

Mirror to the Son of Heaven, Wei Cheng at the Court of T'ang T'ai-tsung, by Howard J. Wechsler; Yale University Press, New Haven, 1974. ISBN 0 300 01715 4.

THE STUDY of mediaeval Chinese history and the Tang period (618-907) in particular have provoked quite a bit of attention from Western writers. However, it is only now that the subject of the minister Wei Cheng (Zheng) has received its first full-length published monograph.

Wei Zheng (580-643) served at the court of the famous Tang Emperor Taizong (reigned 627-650). In this book the author traces with scrupulous care the various stages of Wei's career, and assigns interesting themes to each period. Wei's significance is to have become a kind of legend in China as the perfect example of the minister who never hesitates to criticise his emperor. Chinese historians have accorded him a place as a tremendous success, the archetype of the staying hand, the good adviser. Wechsler, very correctly, raises the problem of whether the minister was in fact quite as successful as he seemed, and concludes that 'in terms of practical results, Wei's remonstrances on major issues were frequently ineffective' (p. 194). Wechsler believes that Wei himself probably felt his career to have been a failure. it was only on minor ritual matters that the emperor really took any notice of him.

One major issue raised by this fascinating study is how the balance of power should, and did in fact, operate between emperors and officials in mediaeval China. Quite clearly, both Taizong and Wei Zheng tried to increase the power of their own particular group — the imperial throne or the bureaucracy. The net result was one of the most famous reigns in all China's history, an era to which all look back as glorious. That the issue of the emperor-bureaucracy power balance remains relevant even up to the present is shown by the fact that Wei Zheng figured as a source of contention as recently as the Cultural Revolution.

One particularly interesting aspect of Tang history debated in this book is how to assess credit for the foundation of the dynasty. Traditional historians, both Chinese and Western, have tended to belittle Taizong's father, Taizu (reigned 618-627), who was the actual dynastic founder. They have claimed that the real and greatest work for accomplishing the establishment of so great a dynasty was undertaken by Taizong. Wechsler questions this interpretation. He shows in great detail that the father was much more than the weakling he has been painted. The author's claim, in fact, is that Taizong 'was the architect of his own founding-ruler myth' (p. 6).

Wechsler's is a highly scholarly and thorough book. It is well written and consequently easy to read. It includes the essential appurtenances of a good sino-logical study: a thorough bibliography including characters; a glossary of characters and a complex index. It is likely to remain the standard book on this interesting subject for some time to come.

—COLIN MACKERRAS*

** Colin Mackerras is Foundation Professor in the School of Modern Asian Studies at Griffith University, Nathan, Queensland.*

TO 1911 . . .

China from the Opium Wars to the 1911 Revolution Jean Chesneaux, Marianne Bastid and Marie-Claire B gère (translated from the French by Anne Destenay); Harvester Press, Sussex, vii + 413 pages. ISBN 0 85 579 9.

DURING the past ten years there have been dozens attempts to write the modern history of China. Sadly, best ones have not been the ones written in Chinese, some of those in English, Japanese and in French. above volume has been put together and translated fr the first volume and the first three chapters of the seco volume of the most successful textbook on mod Chinese history in French, first published in Paris in 19 Of the ten chapters here, five are by Chesneaux, four Bastid, and the final one by Bergère.

One of the most difficult problems about writing Chin history is to decide how much to stress the political a social structures that gave China the semblance of changing order and continuity for two thousand yea and how much the external threats and the internal forc of dissent and opposition that have given that history series of violent ups and downs. For the nineteenth a twentieth centuries this is even more difficult because t threats, both external and internal, seem to have co thick and fast and it is relatively easy to paint a pict of the inevitable disaster for the 'Confucian state' i would lead up the road to revolution. Despite the su stantial chapters with titles like 'Popular Movement 'Decline of the Imperial System' and 'Advancing Tow the Revolution', the three authors of this volume ha succeeded in avoiding the crudely teleological approa Although the reader knows the end only too well, would still be able to find much to think about with ea episode of history as the authors try to present different ways each story might have ended at the ti This is indeed no mean achievement.

There are points of interpretation which will not generally accepted, e.g. the Chinese Middle Age fr 200 A.D. to the seventh century (p. 12); the ancie 'Asiatic' tradition in which economic power was co ferred by office (p. 21), and the feminism in sec societies (p. 39). There are also minor points of de which need correction, e.g. Qianlong Emperor's liter persecution had nothing to do with the great influe of Huang Zong-xi, Gu Yan-Wu and Wang Fu-zhi (p. Hong Xiu-quan, leader of the Taiping Movement, was a poor peasant from Guangxi (p. 93), and the language Guangxi was not Hahka (p. 32). Also, on p. 33, there a small but curious error: after "key area" of the econo there is in brackets *chi chao-ting*, as if this was Chinese expression. In fact Chi Chao-ting is a m name, the author of the authoritative book, *Key Econo Areas in Chinese History*.

These are really minor blemishes. Altogether this is lucid and carefully written textbook. Each chapter is arranged into sections and sub-sections for easy read and this volume includes extracts from thirty-three c temporary documents and seven fine maps. It has makings of the best history of modern China in language. Anyone who reads it would wait eagerly for remaining volumes.

WANG GUNG

** Professor Wang Gungwu, himself a distinguished histor is Director of the Research School of Pacific Studies at Australian National University.*

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'MELODRAMATIC LIBERTIES'

'I have had an interesting life, though in a hidden way —behind the scenes, I mean.' *Edmund Backhouse to J. O. P. Bland, 1933.*

'The greatest genius it has ever been my privilege to know.' *G. E. Morrison, 1909.*

'The most remarkable scoundrel ever known in the Far East.' *G. S. Hall, 1917.*

IT it hard to write about, or even to write a notice of something written about a trickster who got away with it. There is, even in the most moralising among us, a streak of envy about the man who got away with it, especially if he managed to fool bank managers with fake cheques, but many people have done that. Few have fooled the eminent scholars at the Bodleian Library at Oxford when presenting them with valuable historical manuscripts written in faultless Chinese and perfect hieroglyphs by hand—his own.

Such a man was Sir Edmund Backhouse, described by Sir Hugh Trevor-Roper, Regius Professor of Modern History at Oxford in his *A Hidden Life,* a masterly detective work of fact, not fiction (Macmillan, ISBN 0 333 19883 2). The author describes his subject, among other things, as '. . . the brilliant linguist who used his wits to diddle successive patrons . . . the collector whose generosity enriched his old university and who inexplicably abandoned his own papers to meaningless destruction; the secret war-time agent who led his own government on a wild-goose chase; the scholar who created a "masterpiece" of historical and produced a masterpiece of forgery . . . the mystery man, the calligrapher, the pornographer . . .'

Backhouse was, apart from being a scholar and a forger, a mythomane: he invented friendships with the great (all of whom, in London and Paris in the late nineteen-hundreds, he knew) and in 1900, during the Boxer Rebellion, he saved the treasures of the Imperial Court by removing them and storing them near his own house, returning them when the Empress Dowager returned to Peking to occupy the palace after her flight.

Later, Backhouse, the co-author (with J. O. P. Bland) of *China Under the Empress Dowager* (1910) and *Annals and Memoirs of the Court of Peking* (1914), the first described by Professor Trevor-Roper as 'a classic . . . Nothing can replace it in the immediacy of its documentation, the vividness of its detail . . ., and the second as 'a similarly documented anthology of scenes from Court history under the Ming Emperors and their successors . . .'—this gifted scholar had, at about this time, other irons in the fire. His banker father, weary of his son's debts and seeming lack of direction, organised a job for him, in retrospect, a most curious one: representative in China of the solid Clydeside shipbuilding firm of John Brown Ltd. He did little about acquiring armour-plating or anything else concerning his job except to receive a salary (munificent in those days) of £4,500 a year. But his invention was put to work in tasks as imaginative as his forgeries of historical documents.

By 1915, Britain, at war with Germany, was facing a serious shortage of small-arms. At that time, China, until shortly before itself a theatre of war, was again at peace with a surplus of arms. Because their export was forbidden by the Chinese Government and because London insisted on their purchase, the British minister in Peking decided to make use of a secret agent—Backhouse.

It is probable, says Professor Trevor-Roper, that the recommendation came from a friend of Backhouse named Barton with whom he was cooperating on the revision of a Chinese dictionary. Barton finished his career at British minister to Addis Ababa during the Italian invasion, and thus has become identified with the British envoy in Evelyn Waugh's scathing satire *Black Mischief.* But even Evelyn Waugh's brilliant mind could not have invented Backhouse's subsequent moves. There were 'discoveries' of more than a hundred and fifty thousand rifles made in Germany and Austria, maxim guns, three hundred and fifty machine guns made in Germany and would the War Office be interested in field guns, ammunition wagons, more field guns, thousands of rounds of ammunition for them all?

But, oddly, the immense cargo, destined for Hong Kong from neutral China, sailed right on past Hong Kong to a port no one has been able to find on a map, or else, it stayed in Canton.

Barton was angry, and took Backhouse off to confront one of the most feared men in China, the closest adviser of the President. It was this that led to another lucrative job . . . But that is, also, another story.

Professor Trevor-Roper has done a magnificent job on tracing through the devious paths of evidence about Backhouse, checking up on untruths, exaggerations, statements of 'fact' that were mere hopes, in sifting through the two volumes of 'autobiographical' material which was handed to him at the airport of the northern Swiss city of Basel by a Swiss named Hoeppli for donation to the Bodleian Library after examination by a historian—Professor Trevor-Roper, whose search for the material of this most readable and thorough book led him to meet people who had known Backhouse in his heyday, and who had also caught glimpses of him in Chinese dress in the streets of Peking in the last years of his life, which he spent as a recluse.

The book fits in with another work of inspired research, Symons' *The Quest for Corvo,* whose life in a European setting bears a strange resemblance to that of Backhouse —who, incidentally, was even a cousin.

He was hated and admired, sometimes by the same person, perhaps with a few years in between. G. E. ('Chinese') Morrison, London *Times* correspondent and *eminence grise* (see *Hemisphere,* Vol. 21, No 11) was one of them: 'The greatest genius it has ever been my good fortune to know'. Eight years later, Morrison, as shown in his notes and correspondence presently being edited by Professor Lo Hui-min of the Australian National University, was describing him as 'Edmund Backhouse the Sinologue and Author of the faked diary in Bland and Backhouse's book *China Under the Empress Dowager*'.

This self-confessed libertine, brilliant sinologue, successful dabbler in questionable money deals, imposter, name-dropper is best summed up in the first Appendix in Professor Trevor-Roper's book: He died questioned indeed, but not convicted, and serene in his defiance'.

GEORGE PITT

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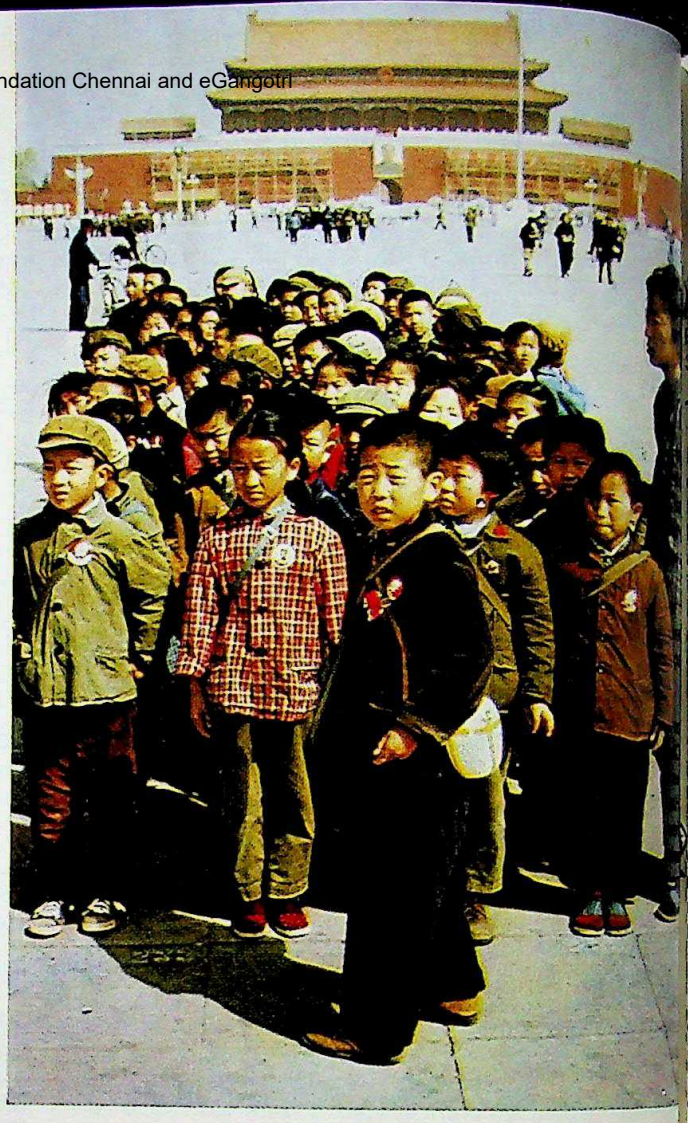
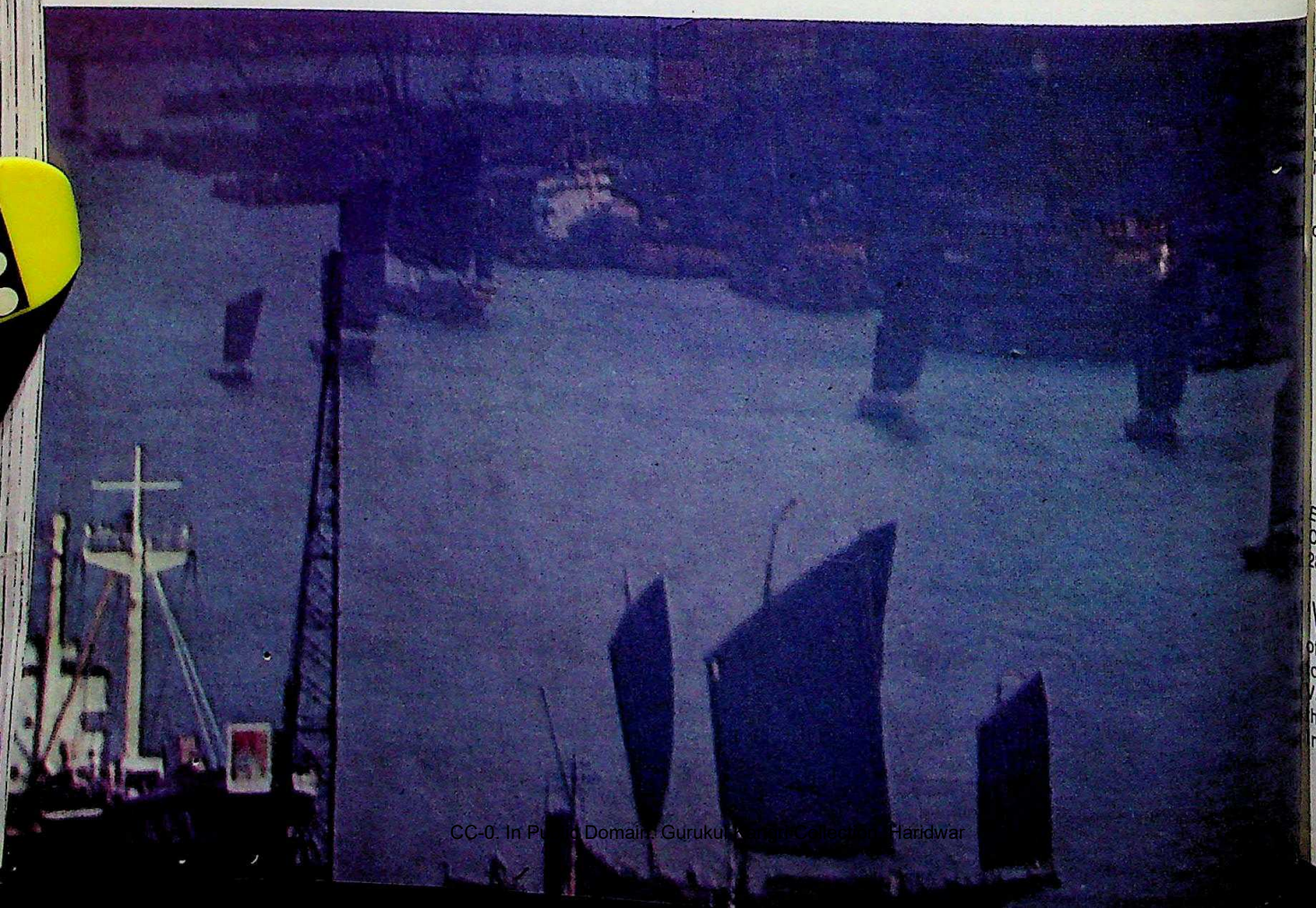


Tourists on the Great Wall . . . onlookers, grown-up and younger . . . farmers at work, as they have been for centuries . . . a bunch of schoolchildren in Tien Am Mien Square pack in for a photograph . . . dusk on Shanghai Harbour: junks and modern cargo ships . . .



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CHINA'S FORTY MILLIONS

China's Forty Millions, by June Teufel Dreyer; Harvard East Asian Research Center Series 87; Harvard University Press, Cambridge, Massachusetts and London, 1976. 333 pp. ISBN 0 674 11964 9.

THIS is a very valuable book for all students of the internal policies of the People's Republic of China. It is often not known, or taken into account, that there are in fact forty million citizens of China who are not of ethnic Han, that is, Chinese, origin. In addition to the Mongols and Tibetans, there are many millions of others, mainly in southwest China, who speak their own languages, have social customs very different to those of the Han, and are in general, on a lower level of cultural and economic development.

Under the Empire these minorities were either ignored or suppressed: those who could acquire knowledge of the Chinese language, and above all, of the art of reading and writing in Chinese, could qualify for the careers open to Han Chinese of the same attainments: but there were very few, and in many of the minority peoples virtually none who had these qualifications. The minorities were a neglected segment of society, whose sole hope of betterment was to assimilate with the Han. This continued to be their situation under the Nationalist Republic.

Much of this has been changed under the present regime in China and the author of this book has done careful and extensive research in the policies that have been applied, and their consequences. The minority peoples are now granted the right to education in their own languages, to self government, and to the preservation of their own customs and art. But, as the author shows, this general policy has from time to time varied in emphasis and encountered real problems. In cases—to take an extreme example—where the custom of a minority, the Wa in western Yünnan, included head-hunting, no central government, however solicitous for local rights, could be expected to permit it. But the Wa believe that unless their fields are fertilised annually with human heads, the crops will fail.

There has also been a latent, and at times an open conflict in the Chinese Communist regime between those who consider that the progress of backward peoples towards socialism must be gradual, and those who claim that 'People's Democracy' cannot wait for laggards. This view tended to dominate during the Cultural Revolution but has receded since then. How far recent changes and the elimination of 'The gang of four' has modified policy once more, is too recent to be recorded in this work.

In the early formulation of minority policy the Chinese took Russian practice as a model; but it has been found that this was not always helpful under Chinese conditions. The Russian minority peoples are relatively large nations, which could be granted status as member republics of the U.S.S.R. In China only the Mongols and Tibetans fit this description. There are fifty-three different peoples listed in the Appendix to this book, and the smallest has only six hundred people. The largest are the Chuang with nearly eight million, living in the south west, Kuangsi and Yünnan, but very much assimilated with the Han. The two million seven hundred and seventy thousand Tibetans are the least influenced by Chinese culture, and have been the most difficult problem. The Mongols of Chinese or Inner Mongolia are over one and a half millions, but they have assimilated to a considerable degree. One of their best known leaders, Ulanfu, born a Mongol Prince, is now a high ranking member of the Politburo of China, and recently visited Canberra as leader of a Chinese trade mission.

The author concludes that, 'The Chinese Communist Party must be credited with having made sincere, sustained and often creative efforts to deal with China's minorities' (p 276), but adds, 'Minority problems in most societies have proven enormously resistant to easy or rapid solutions . . . . . it is not yet clear that the People's Republic of China constitutes an exception'. Australians, bearing in mind their own Aborignals, will not be surprised.

C. P. FITZGERALD

The reviewer is C. P. FitzGerald, Emeritus Professor, Far Eastern History, Australian National University.

NO 'BOTTOMLESS GOLDMINE'

East India Fortunes: The British in Bengal in the Eighteenth Century, by P. J. Marshall; Oxford University Press, 1976; 284 pages, 2 maps and VIII tables. ISBN 0 19 831566 5.

'WE ARE men of power you say, and take advantage of it. Why man, what is the use of station if we are not to benefit from it?' With such sterling words did Henry Vansittart, Governor of Bengal in the early 1760s, reject the contention of an English contemporary that the East India Company's activities in Bengal in the post-Plassey era constituted a stain on the national character of the United Kingdom. Peter Marshall joins with Vansittart in taking a dispassionate view of Britain's 'misdeeds' in eighteenth-century Bengal. Criticising his predecessors in the field for their readiness to apply moral judgements and to apportion 'blame', he seeks not to expiate the East India Company's servants from their crimes but rather to put them in a proper historical perspective.

Primarily, the book is about the efforts of . . . men to make their fortunes in Bengal.' (p. 1). This in itself has

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been a controversial area ever since Clive and company returned home as 'nabobs' and bought their way into the House of Commons. Judging the many by the few, Englishmen came to look upon India as a bottomless goldmine ripe for exploitation. Marshall shows just how shallow this view was.

'However they might choose to define it,' he concludes, 'few men attained their independence from Bengal. The most obvious reason was that relatively few who went there ever came back.' (p. 254). Not content with vague innuendoes about high mortality, Marshall hammers the truth home with the aid of statistics. And what statistics! It appears that about two-thirds of all civilians who went out to Bengal before the 1770s died in harness. To a large extent, then, the lucky ones were determined by a process of natural selection. But not all those who survived made fortunes. Marshall believes that about fifty of the one hundred and seventy-eight servants who returned to England before 1785 did so in circumstances that were less than affluent. Again, he provides hard evidence in the form of statistical case studies to back up his point. Perhaps the most chilling revelation in the whole book concerns an obscure servant named William Brooke, who came out as a 'writer' in 1769. Brooke, like most of his contemporaries, had visions of fame and fortunes. He found neither. Either too poor or too ashamed to return home, he lingered on as a pensioner at Calcutta, eventually succumbing to disease and old age in 1833!

If fortune-hunting was a chancy business it could also be an immensely rewarding one. Estimates of the private gain 'ill-gotten' from India have been made before, but no-one has ever gone into the business of accounting more thoroughly than Marshall. Collectively, he reckons that eighteen mililon pounds was sent home in one form or another between 1707 and 1784 — an average of about five hundred thousand pounds a year. Whether this constituted a 'drain' on Bengal's wealth is a point which has long been debated, not always with academic precision. Marshall's verdict, as one might expect, is cautious and sober. Like his distinguished predecessor in the field, American Holden Furber, he concludes that a kind of 'drain' did occur in the sense that there was a constant surplus of exports over importments during the period. But he deftly dodges the question of whether such an export surplus was really damaging by asking — as if in response to the offstage barbs of Indian critics — whether Bengal's tribute to the Mughal emperor in the early eighteenth century was any less of an economic drain. Apart from that, Marshall is probably right when he suggests that any final assessment of the impact of Britain's money-making on the Bengali economy must await the accumulation of 'reliable data about population, output [and] . . . the volume of trade.' (p. 261).

More interesting, perhaps — and no less staggering — are the statistics relating to individuals. Marshall provides detailed breakdowns of the amounts remitted home by virtually all the senior Company servants in Bengal: Clive, William Bolts, John Johnstone, Richard Barwell and Warren Hastings, to name only a few. To those familiar with the swashbuckling exploits of Robert Clive it will come as no surprise to learn that he made more money out of the Bengalis than anyone else — some four hundred thousand pounds by his own reckoning. What does surprise is the extent of Clive's hypocrisy, as revealed in his attitude to the acceptance of presents by his contemporaries. Having himself accepted sixteen *lakhs* (about a hundred and seventy-six thousand pounds) in cash and twenty-seven thousand pounds a year in form of a land grant *(jagir)* from Nawab Mir Jafar in aftermath of the coup of 1757, Clive left no stone untur during his second term as Governor to expose the r appropriations of his colleagues and subordinates. Do less in his own mind he saw the two cases as differ but his explanations are not convincing. The Society Trade, which Clive set up in 1765 to regulate the exce of private inland trading, is revealing of the same do standard. Incorporated with the senior Company m chants and army officers as shareholders, the Soc reaped enormous profits as a result of its monopo over salt, betel-nut and tobacco. But the lion's sh went to the Governor and Council. Clive himself m over twenty-one thousand pounds from its first year operations.

Studying the capitalistic enterprises of Compa servants in Bengal opens up for Marshall a wider fi of speculation about the rise of British power. 'The fa that British political supremacy in Bengal was both p ceded and accompanied by a striking growth in Bri private activities within this province obviously invi speculation about the two,' he avers. (p. 258).

Surprisingly, therefore, the body of the book ma no obvious attempt to substantiate the connection. Th subject is taken up, briefly, in the conclusion, but he again the reader is left for the most part to form his o judgement. That the question of trading privileges, a particularly the use of the Company's *dastak* or duty-fr pass, was an important factor in bringing the lon standing tension between the Company and the Nawab government to the boil in 1756, Marshall readily conced But at that point he clouds the issue by asserting th the Nawabs' grievances were chiefly against the Co pany and not against the 'private' traders as such. Th is curious, for the whole thrust of the book seems suggest that the Company's servants made little eff to distinguish between their 'public' and 'private' perso If the East India Company was a great public institut it was one which depended for its very lifeblood individual private enterprise. Without the prospect lucrative private trading to supplement their mea official salaries it is doubtful whether many men co have been induced to put up with the hazards of Ind service. Moreover the wealth acquired by Compa servants in their capacity as private traders provide as Marshall shows, much of the capital for the Company purchase of Indian cotton and Chinese tea. Indeed, partnership between public and private sometimes w further. Marshall tells us that in the 1770s the Compa resorted to buying more and more of its silk and piec goods 'investment' from European rather than Indi merchants. These 'merchants' were none other than own servants. Thus Charles Grant, future Compa Director and Evangelical, made a fortune while servi as Commercial Resident at Malda selling piecegoods to himself!

At various points the book seems on the verge making a major reassessment of eighteenth-century Ben gali economic history; but somehow it never quite ful our expectations. In Chapter III, for example, Marsh explores the reasons for the displacement of Asian European shipping in the 'country' or coastal trade. Af disposing of all the obvious hypotheses he conclude somewhat lamely, that Asian merchants probably entrus their goods to British ships because they felt 'they we in fact entrusting their goods to the Company wh privileges private Englishmen enjoyed and from wh

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they must have seemed inseparable in Asian eyes' (p. 64). Similarly, in analysing the reasons for the decline of Bengal's west-coast trade and the 'swing to the east', Marshall provides us with a wealth of detail but adds nothing of substance to the standard interpretations of Harlow and Furber.

Most tantalising of all, perhaps, is the suggestion that the English in Bengal were as much exploited as exploiters. 'For much of the eighteenth century', writes Marshall, 'it would be . . . appropriate to discuss the impact of Bengal on the British.' (p. 261). Chapter II does contain some hard evidence to this effect. For instance we are told that European traders were disposed to draw upon established systems of credit to finance their purchase of goods and to make use of Indian intermediaries, called banians, to manage their day-to-day business operations. The relationship between banian and European, says Marshall, was not so much one of servant and master as a form of partnership to which the European might contribute no more than the business name and certain privileges useful in trading, such as the *dastak*. 'If these stories are typical,' he concludes, 'a fair proportion of what appears to be European trade can only have been European in the most nominal sense' (p. 46). Unfortunately, this assertion remains — an assertion. The chapter which deals with the expansion of British inland trade after Plassey barely mentions the role of banians and, by focusing on the enormous acquisition of wealth by Company servants seems, if anything, to invite an opposite conclusion.

It would be easy, but unfair, to dwell on the book's shortcomings. If it sometimes fails to deliver what it promises, this is the fault of the subject-matter, not of the historian's craft. By its own admission, *East Indian Fortunes* is a book about the British in India. Like Pamela Nightingale's recent *Trade and Empire in Western India*, it is concerned with the motives and activities of Europeans in a colonial context, not with that context as such. Even the background chapter on eighteenth-century Bengal is subtitled: 'The View From Calcutta.' Sociologically-minded South Asianists may disapprove of this Eurocentricity but students of colonial and eighteenth-century British history will not mind in the least. *East India Fortunes* is scholarly, well-researched and surprisingly readable. No better book in its field has appeared since the publication of Furber's *John Company* in 1948; and that is high praise indeed.

—I. F. S. COPLAND*

** Dr Ian Copland lectures in the Department of History at Monash University, Melbourne.*

THE TWAIN

When his soft breath fans O-Natsu's hair,
when his signs quicken into hail,
when his fevered palms brush O-Natsu's hand,
when his tears fall thick on O-Natsu's sleeve,
when the flame darting from his dark eyes
kindles its image in O-Natsu's breast,
when his red lips burn on O-Natsu's mouth,
though secret raging passion pouring
from either soul drowns her in desire
yet ever irresistible is . . .
ah! Seijuro

—JOYCE ACKROYD

Based on Yotsu no Sode *(1897), by Shimazaki Tōson (reproduced below).*

四つの袖

をとこの氣息のやわらかき
お夏の髪にかゝるとき
をとこの早きためいきの
骰のごとくはしるとき
をとこの熱き手の掌の
お夏の手にも觸るゝとき
をとこの涙ながれいで
お夏の袖にかゝるとき
をとこの黒き目のいろの
お夏の胸に映るとき
をとこの紅き口唇の
お夏の口にもゆるとき
一人こそしらね嗚呼戀の
ふたりの身より流れいで
げにこがるれと蒸へどゝも
やむときもなき清十郎

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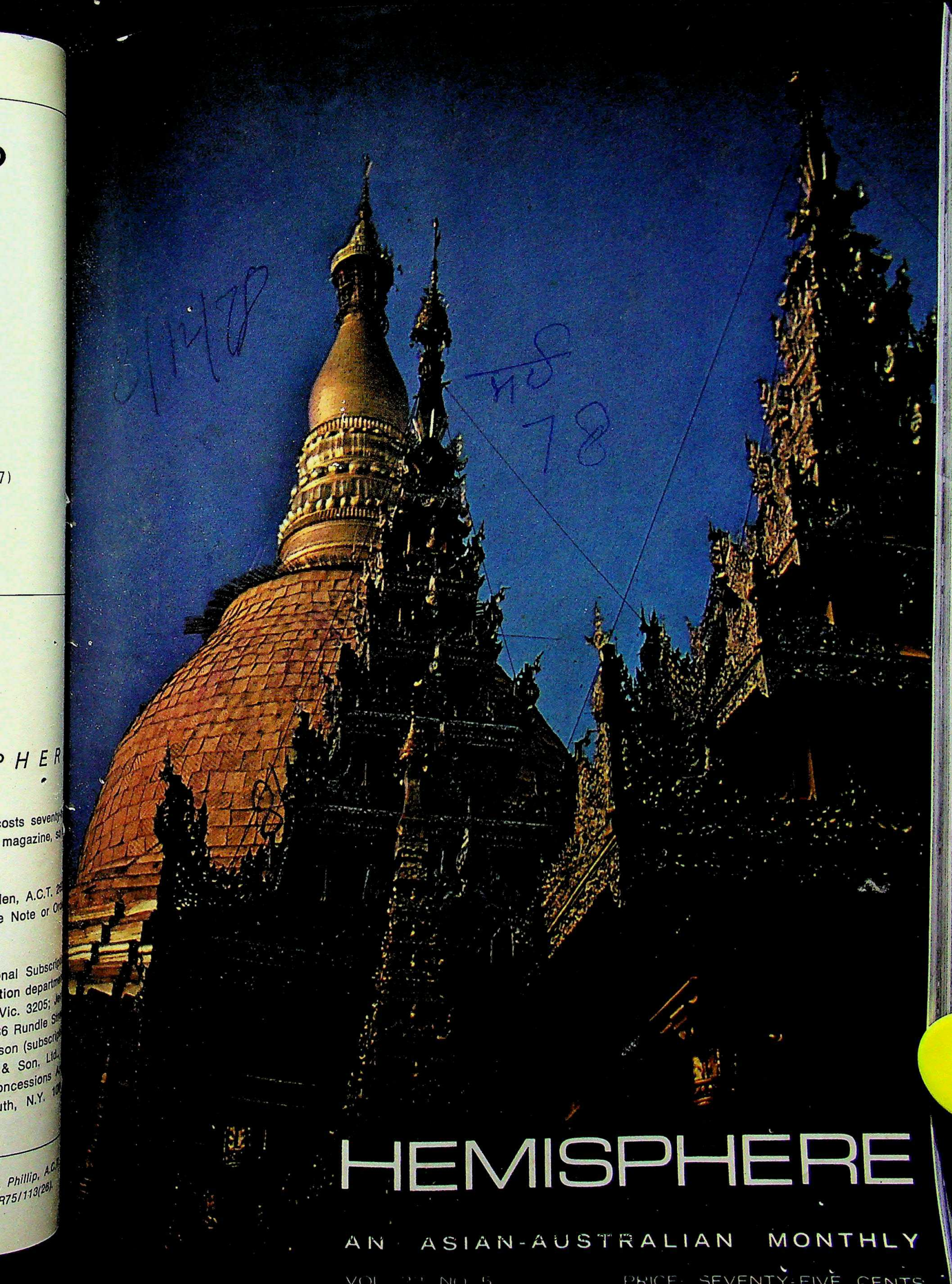

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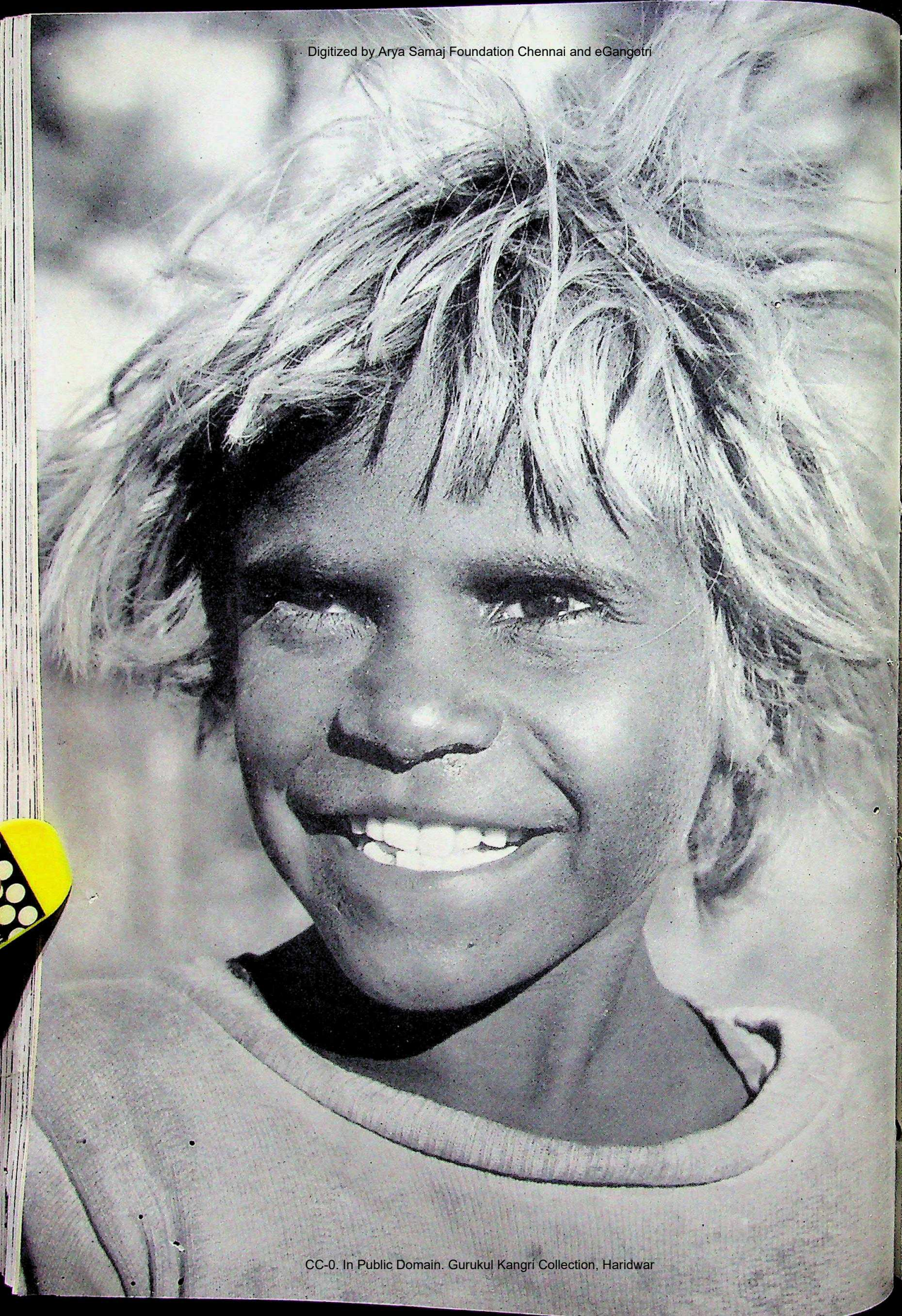

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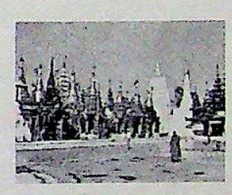

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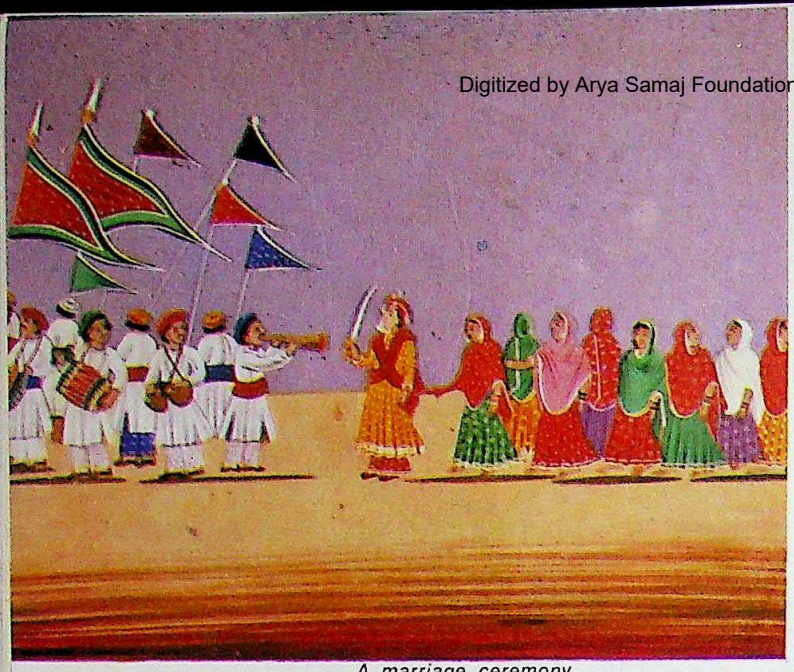
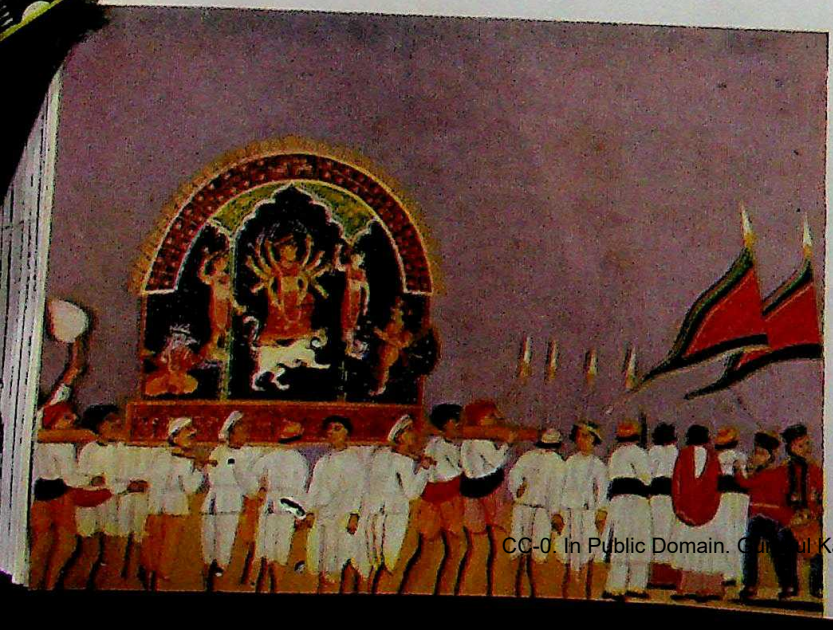


A marriage ceremony.

Pictures from Oriental Illustrations, *1858-1860; courtesy National Library of Australia; others courtesy of Biblioteca Medicea-Laurenziana.*

A decorated cart and, below, a pooja*—a ritual offering ceremony.*



IN 'COMPANY' TIME

B. N. Goswamy and A. L. Dallapicco

FROM somewhere in South India, perhaps Bellary, England, and on to Florence is a seemingly long journe for a group of paintings to make in the nineteenth centu But this is precisely what happened to a group of thir two paintings, now in the Biblioteca Medicea-Laure ziana. With them came to Italy, in 1884, the kind of wo that the British had in a way 'warmed to', when the commissioned from Indian artists unendingly long se depicting tribes and castes and professions: rat-catcher mendicants, jugglers, washermen, sepoys, basket-weaver astrologers, dancing girls, as well as charlatans of descriptions. The paintings had passed into the group Manuscripts of early and rare books collected by t Earl of Ashburnham (1797-1878). In 1884 the Ita Government bought the larger portion of the Libri Colle tion (and the Dante Manuscript) from the estate of t Earl for twenty-three thousand pounds sterling.

For all their dryness, especially when compared to t 'high' tradition of Indian painting, 'Company' paintings they have come to be called because most of them we commissioned by, or produced in response to a deman stimulated by the interest shown by officers of the Engli East India Company in India, generated a genuine e thusiasm among many people. These paintings had seve virtues: they were inexpensive, ethnically interesting easily replaceable, served much the same purpose t picture-postcards do today, and often sold in comple sets. One can imagine the thrill experienced by membe of the family 'back at home', they who would never ventu into this exotic part of the world, when they huddle around a group of paintings that had just come from Ind

The men who collected and sometimes commissione these paintings were taken up quite earnestly with t talent displayed by Indian artists, in particular their abi to adjust their style to the taste of this class of Europea and producing these standardised works with whatev talent that they themselves possessed.

A major centre of Company painting in South India w Tanjore. There were others, of course, such as Trichin poly, Seringapatam, Arcot, Madurai. But it was the Tanj artist who excited the imagination of some people.

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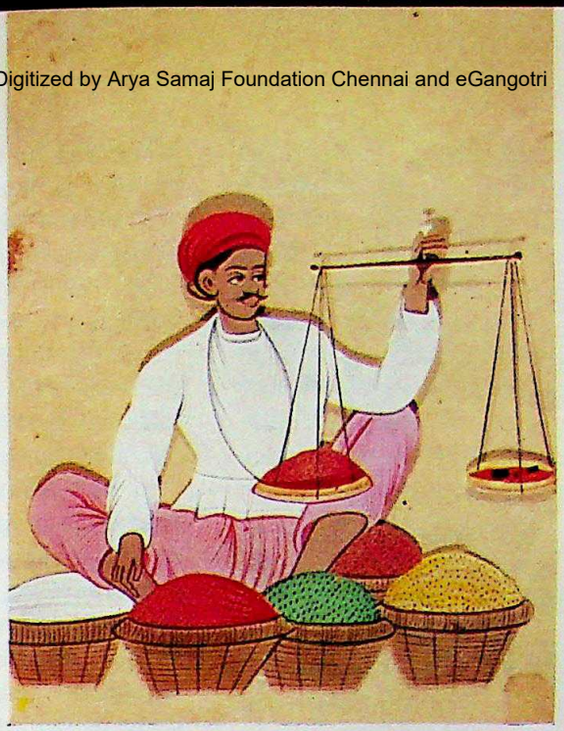
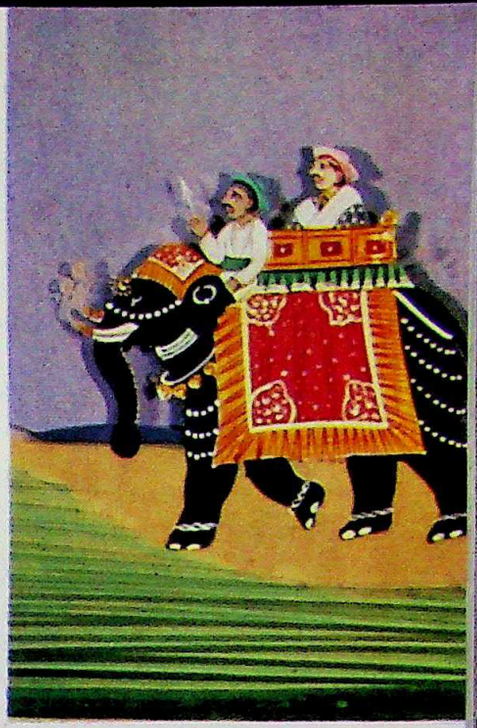




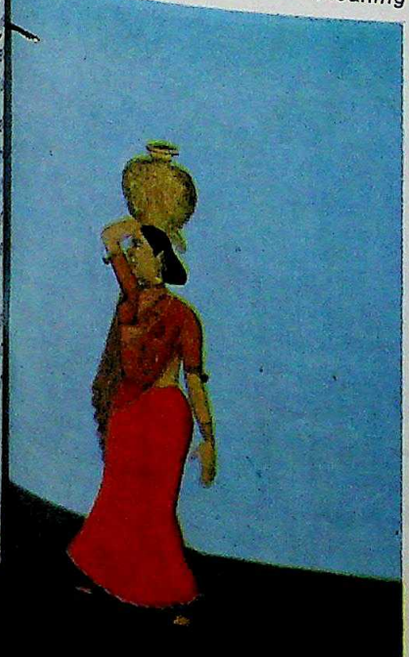
A street musician, member of the Hindu Vaishnava sect; a grain vendor; an elephant.

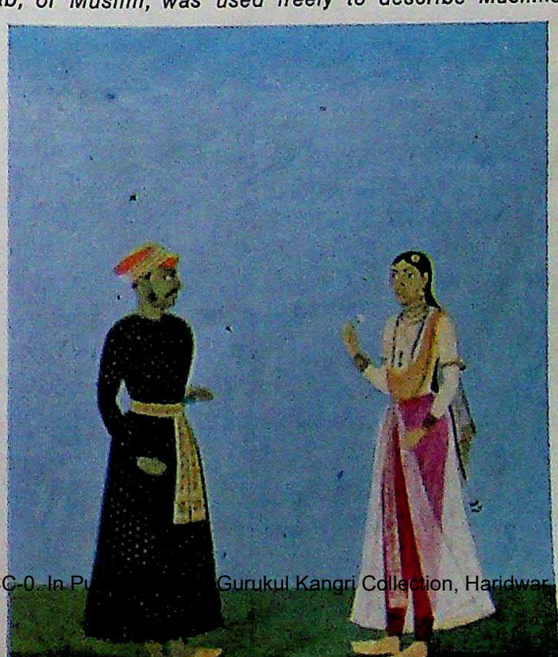
In particular, one of these, who came to be called the 'Tanjore Moochy' earned a measure of respect which was unusual. This is the way an English Officer, Charles Gold, wrote about him in *Oriental Drawings,* London, 1802, and the class from which he came:

'The accompanying is the *fac-simile* of a painting done by one of their ablest *artists,* well known by the title of the Tanjore *Moochy,* and famed throughout the country, not so much for the specimens of his own invention, as for his great skill and ingenuity in imitating the finest miniatures from the European pencil, so as to deceive persons of good taste, if not the connoisseur. The Moochye, or Artists of India, usually paint in the style represented in the present drawing, but in body colour, and sometimes finish their pictures in the delicate and laboured manner of a miniature; though they at the same time are entirely devoid of truth in colouring and perspective, and constantly err on the side of ornament and gaudiness of dress; excepting where the subject does not admit much finery and decoration, as with beggars; and then they possess considerable merit as to costume and character. On the suggestion of the Europeans, some of the country artists have been induced to draw series of the most ordinary casts or tribes, each picture representing a man and his wife, with the signs or marks of distinction on their foreheads, and not in their common, but holiday clothes. This of course does not familiarize their appearance, but disguises the character so much, that were it not for some particular badge or implement, such as the peon's belt, and the golden tea kettle in the cook's hand, it would not be an easy matter to discriminate their occupations. These drawings, notwithstanding, do credit to the uninstructed authors of them; and the world is about to be gratified with a series of coloured engravings from them, under the title of THE COSTUME OF INDIA, which, when revised by the hand of an able European artist, will certainly merit notice and encouragement from their novelty.

For all the interest in the work of the *'Moochys',* however, very little was recorded about them. Fortunately we have more information collected in the nineteenth century, which enables us to place them in some perspective. Ordinarily the *'Moochy'* was a worker in leather and it

A lady with a water pitcher; a couple of noble origin. A Moor and a woman. (The word Moor, corrupted from the Portuguese mouro, *meaning Arab, or Muslim, was used freely to describe Muslims.)*





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does appear strange that, of all people, it should be leather workers (untouchables) who should distinguish themselves in painting, at least in the eighteenth century in the south of India. But the connection is really not quite as remote as it might appear to begin with, for a section of the *'Moochys'* appears to have been traditionally involved with the craft of painting through production of shadow puppets which were made of leather and used extensively in large areas in the South. But, with time, the *'Moochy'* became an all-purpose man, from being a leather-worker and a painter alone.

In his seven-volume work on the *Castes and Tribes of Southern India* (Madras, 1802) E. Thurston discourses on what he calls the 'Marathi caste of painters and leather-workers' in south India. From Thurston, we learn that the *'Moochy'* fitted easily into menial jobs in the Government Offices, preparing ink from powders, cleaning bottles and sharpening pencils for the *Sahibs,* while binding books and making paintings and saddles and toys, perhaps at home. The *'Mochis',* who were mainly involved with painting, belonged to the *Chitrakara* sub-caste. Also called *Bannagaras* and *Rachevars,* they were 'painters, decorators and gilders', who made 'trunks, palanquins, lacquer toys and wooden images for temple-cars, etc.'

Throughout the description of these groups of castes, there are repeated references to the versatility of these men, as also to the fact that they were highly skilled workers who, for all their lowly ritual status, were thoroughly familiar with Hindu mythology and used its themes in their paintings and artefacts. In the late eighteenth century and the early nineteenth century, however, one group of *'Moochys'* seems to have decided quite clearly to turn their hands to describing the world around them as seen through the eyes of the 'foreigner'.

For all their professional interest in India, an interest accompanied with genuine curiosity, the 'foreigners' knew very little about the complexity of Indian life and the incredible variety of types and characters they saw around themselves. For this reason, after his general wish to have a set of paintings describing mendicants or men plying different trades and professions had been realised, a patron or a buyer often felt the need to make notes on the paintings themselves, most often at the bottom, sometimes on a fly-leaf or on the reverse. One can easily visualise that the man who acquired a painting, as a part of a set, for example, of a *Sadhu* of the Kara Lingi sect, would find a general label describing him as 'a Sanachee and his servant' very inadequate; he went on to add, therefore, that this was 'a caste of people who dedicate the whole of their life to religious devotion and have totally relinquished all communications with the world and carnal pleasures. All castes from the Bramin to the lowest Malabar may be admitted into this sect, but they must be initiated when young and must act as servants of the Sanachees many years.' It must have taken pre-Victorian restraint for the writer to omit referring in the description to the fact the *Sanŋyasi* depicted in the painting was stark naked and, more, had an iron ring passed through his penis, as practice of this sect required him to do.

The strangeness of the characters of such ascetic characters would, for the patron, extend equally to a young devout man, who went about clad in nothing but a dh bore very prominent caste-marks all over his body a danced around to the tune of the music he made hims with the help of brass cymbals in his left hand and lute-like instrument slung around his neck which strummed as he went along.

In most sects of this order — and they are seeming produced in prodigiously large numbers — there is stylised depiction of the group occupying the lower fo of the painting, generally flat but a little creased and w tufts of grass sprinkled evenly around it, and in the s some indication of a horizon through streaks of colo suggestive of clouds. There is no architecture; no oth persons than the direct subjects of the paintings; n further definition of backgrounds. It is as if the paintin are not to be seen as vehicles of painterly skill but a concise statements in which the artist wishes to move o as quickly as he can.

But this is wholly characteristic of this type of paintin especially at this time. In another five paintings, whic are somewhat different from those just described, we get to see more earth-bound people, but also rendere in the same forthright fashion. There is a 'Sepoy a his wife'. (*Sepoy* is a word from the Persian, mea ing, in India, a native soldier, disciplined and dresse in the European style). He is obviously proud of strange uniform he wears and the musket he rests on h shoulder even as he fixes us with his eyes, and dain holds up a flower in his right hand. A housewife of reasonable station in life is carrying a pitcher of wat on her head; another woman, lower in status, walks w a pitcher in the crook of her arm as her young son follo her; a Muslim-looking man of good station in life, stand face to face with a young lady of the world, dressed her finery; a young Negro in very uncomfortable-look jacket and breeches, is described as 'A Caffree boy', or person of Negro origin, from the Arabic *Kāfir.* None these is a character imagined by the painter and ever thing is said with the clear intent of documenting what all around. It is characteristic that what might be regarde as 'normal' men and women, the likes of which must ha been seen by the thousand in every town and city, hard received attention. It is the unusual, the exotic, th interested the patron.

The style of most of these paintings does not req need any detailed comment, for it is very similar to w which is quite widely known, mostly through publicatio of 'Company' paintings. There is no incompetence in t work; in fact, occasionally one sees a true spark inventiveness that is added to the general ability of artist in his control of the line and his capacity to rea a form within the strict conventions of his style. What notices, mostly as a contrast to the much richer and m felt works in the high-tradition of the true Indian min

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tures, is the dryness of this style, its routine character. There are the usual European conventions which begin to enter the work of the painter, including prominently some indications of shadows. And there is the static nature of the figures, drained of true vitality. But much of the earlier Indian technique continues to linger; the manner of laying the ground colour, the conventions of the wisps of clouds, of the combinations of points of view, and torsions in the rendering of a figure. All in all, the technique really shows relatively little European impact. It is the approach that seems to have changed.

There are two other groups of paintings in the same collection. One group of five, somewhat derivative and hard of line, are what seem to be late versions of earlier works from the Deccan and Persia. The poet sitting in the garden, or the seated holy man with closed eyes, seem to go back clearly to Persian originals. There is a portrait of a holy man in Arab dress and two others; one of the weaver-saint Kabir, with a disciple, and the other of three derelict-looking *'Pandarums'*, or non-brahmin priests, and fakirs smoking and looking generally pleased with their situation.

The least interesting, not from the point of view of subject matter, but visually, is a group of ten miniatures in water-colour, as distinct from the gouache of the works earlier described. These are probably the work of an amateur European artist, mounted and given the same shape as Indian miniatures, although they might just conceivably be the work of an Indian who was learning to use water-colour, in the approved manner of the *Sahibs*. They are, however, completely devoid of feeling.

But then this was what India was made of at the end of the eighteenth century. There are not only all kinds of people, but also several ways of seeing them. And the matter-of-factness of 'Company' painting reflected what was happening to this land in these times. It was being drained of its warmth, as it was beginning to veer between being itself and being something else.

THE AUTHORS: Professor Goswamy is Head of the Department of Fine Arts at Panjab University, Chandigarh. Dr Dallapiccola teaches Indian art history at the South Asia Institute, University of Heidelberg. Both have published several important works on Indian Art.

HUNTER-GATHERERS

Kalahari Hunter-Gatherers: Studies of the !Kung San and their Neighbors, edited by Richard B. Lee and Irven DeVore; Harvard University Press, 1976; 408 pages. ISBN 0 674 49980 8. (Review copy from Australia & New Zealand Book Co. Pty. Ltd.)

THE SAN people (formerly called Bushmen) and the related Hottentots once formed the great majority of the population of southern Africa. But the arrival of the Dutch in 1652 led to a precipitous decline in the San population as many were deliberately exterminated and others enslaved and stripped of their cultural identity. Many other San have been absorbed through inter-marriage into the Bantu population of southern Africa. Today there are only about fifty thousand San left. These have been pushed back into the inhospitable area in and around the Kalahari desert. Traditionally the San lived by hunting and gathering, but in recent years most of them have become involved in agriculture, herding, or wage-labour. Today only 5 per cent of the thirty thousand San in the Republic of Botswana continue to be full-time hunter-gatherers.

This book is a collection of papers by a group of scientists (the Harvard Kalahari Research Group) who collaborated, under the direction of the editors, in an extended study focused on the !Kung, the most isolated and traditional of the San hunter-gatherers. The project was started in 1963 with the aim of recording as much of the traditional San way of life as possible before it disappeared. The investigators included psychologists, ethologists, demographers, and medical doctors as well as anthropologists of various specialisations. Though their methods and interests were diverse, the investigations made by the researchers were united by 'a shared theoretical orientation that can be broadly defined as ecological, ethological, and evolutionary'.

The papers which make up the book are grouped into four broad categories: ecology and social change, population and health, childhood, and behaviour and belief. They describe in fascinating detail how the traditional San eke out a living even in areas where surface water is entirely absent for several months of the year, and people must depend on moisture derived from wild melons and tubers. The ways they cope with problems of child-rearing, disease, and social tensions are equally well explained. Also, the inner world of the people is portrayed vividly in an abbreviated autobiography and a selection of amusing folk-tales. The sophistication of the analyses and the richness of the data clearly show the value of having specialists study different aspects of the same society. Although some papers are rather technical, most are admirably free of unnecessary jargon. For a collection of this sort, the book is quite well-integrated, though there are inevitably some gaps and discontinuities.

This book would be of special interest to students of the Australian Aborigines. Although the !Kung and the desert Aborigines lived in similar environments and had similar basic economies, the cultural elaborations, especially in religion and social life, were very different.

—KIRK ENDICOTT

Dr Endicott is a Research Fellow in Anthropology at the Australian National University.

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'. . . holding on to things is foolishness . . .'

A LITTLE later than four thousand years ago, a kingdo was established on the rich alluvial plains of the Gang in northern India, called Mithila. Much later, it is sa Gandhi began his movement to get people to adopt simple life in Mithila; here, the story has it, Rama marri the beautiful Sita whose lives and loves are written a spoken of in the Ramayana; the Buddha himself was the kingdom, as was the founder of the Jain religion.

For centuries, the women of Mithila have been artis it is a matriarchal society, and it is the girls who propos to the men by making drawings which, for five thousa years or more, have been quite explicit, showing, intricate and inventive design, a phallus penetrating *yoni,* the symbol of the female genitals.

The walls of the simple dwellings, made of m plastered on to a framework of branches and then wh washed, are decorated with the symbolic paintings. In t past few years the Indian Government has provided pap and brushes and inks so that the women of the re may make drawings which are sold through the organi tion in India which markets cottage industry products

Apart from the marital connotation, the paintings a deeply suffused with Hindu beliefs, and one of the m favoured subjects is Krishna, playing his flute for customary companions, the cow-herds, the *gopis.* In illustration, taken from *The Art of Mithila* by Yves Véqua (Thames and Hudson, ISBN 0 500 27093 7), with a prefa by Ajit Mookerjee, Director of the Craft Museum in De Krishna is shown with his partner Radha.

In addition to the murals, the paintings on paper, women of Mithila play an important part in religio ceremonies. As Yves Véquaud says: '. . . Mithila's wom are expected to draw on the ground for certain religio celebrations. These drawings—magic circles symbolis the dwelling of a god—are called *aripanas,* and are w in Tibet are known as mandalas. They have been scribed as psychic representations of the univers Whether as a solar disc, a full-blown rose, or a cir one draws round oneself as protection against a vamp this archetypal image is known in almost every civilisati

And it is not only because, as the author of t appealing book says, the circles are universal (as *sardana,* danced by a circle of Catalans survives aro Barcelona as a remnant of the Phoenician settler's s worship)—it is not only because of that, but the freshn of the complex geometric designs, the simplicity of portraiture and the liveliness of the colour make paintings of the womenfolk of this Bihari region attrac to human beings anywhere.

—BENJAMIN JOHN

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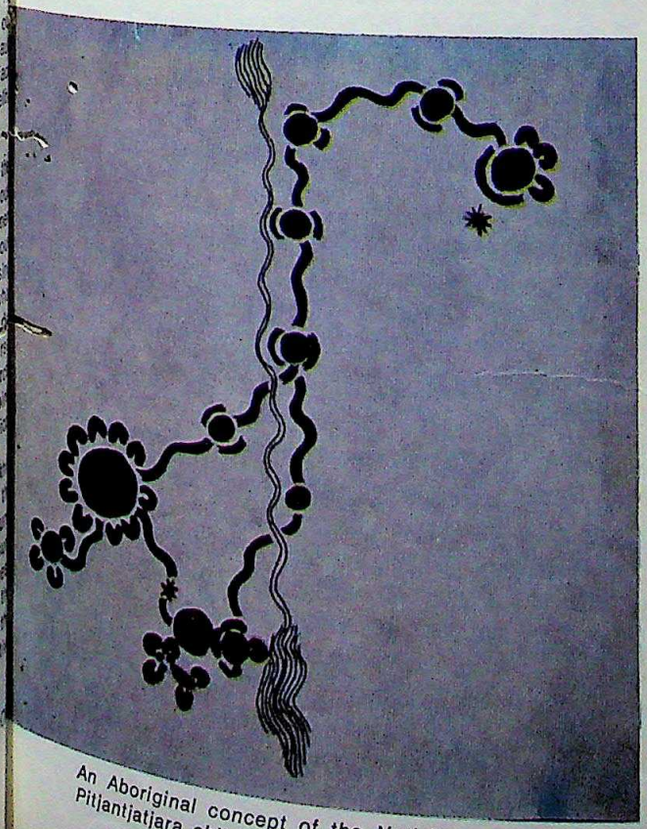
THE ABORIGINES AND THE WEST

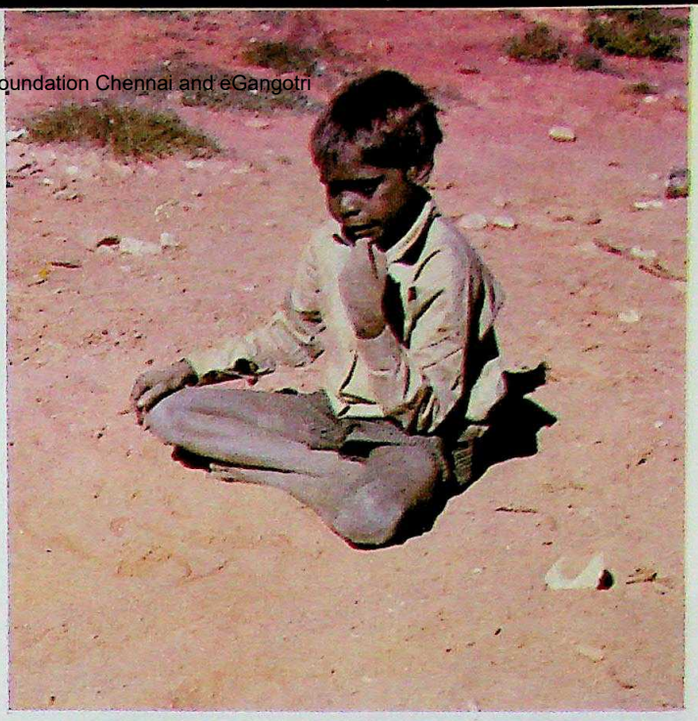
For nearly twelve months, a distinguished sociologist from Canada has been looking into the impact of the western way of life on the Australian Aboriginal. More specifically, Professor Mike Shimpo, Associate Professor of Sociology at the University of Waterloo in the Canadian province of Ontario, has been investigating the effects of western education on Australian Aboriginal children. This was done at the request of the Australian Department of Education which, a few short years ago, began an experiment described by observers from abroad as highly successful. The experiment was to give aboriginal youngsters self-assurance by teaching them in their own language to begin with, and then enlarging the curriculum to include the lingua franca which English has become. The innovation is recent enough to be facing some need for adjustment, as Professor Shimpo explains in this interview.— Editor.

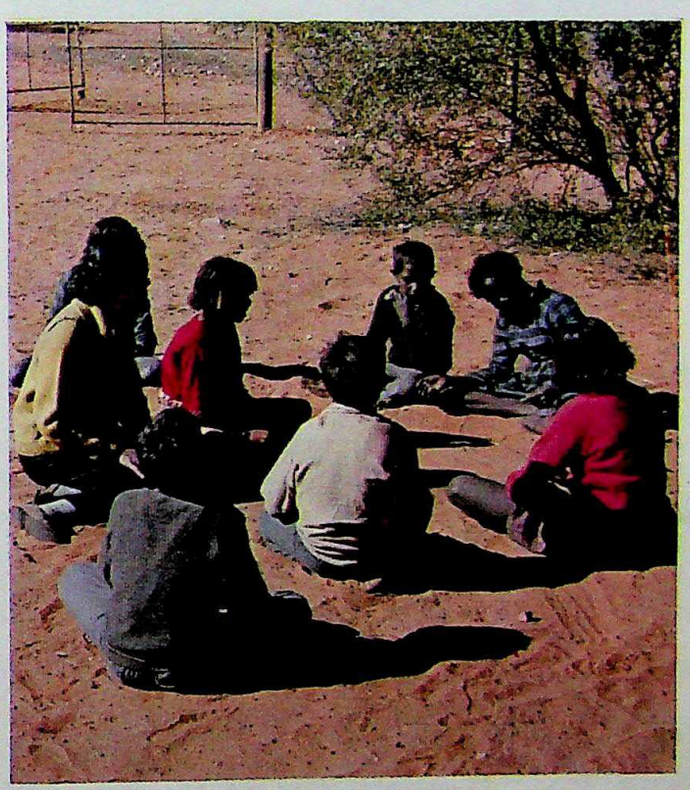
What have you found over the past few months about the adaptation of Australian Aborigines to Western ways?

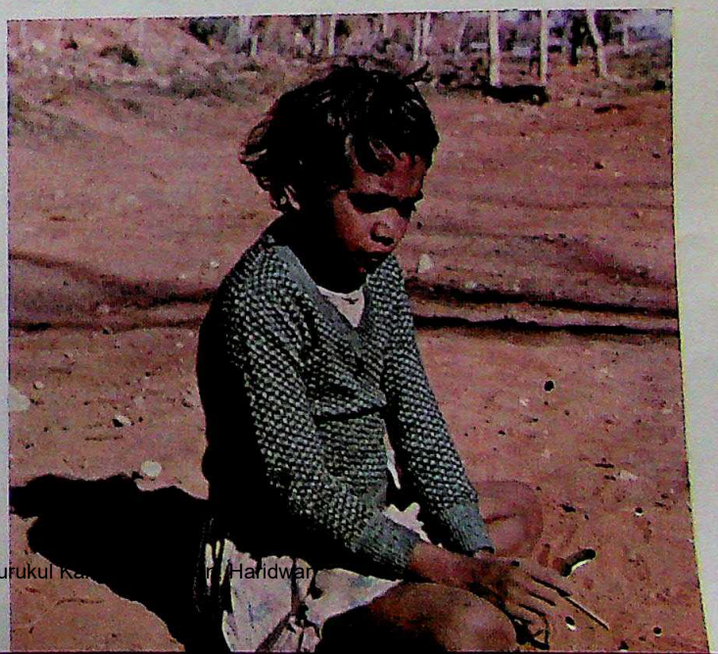
Since I came to Australia in July last year, I have visited about thirty Aboriginal communities to analyse the social process of Aboriginal education in the Northern Territory. They are very tribally oriented up there and differ greatly from Aborigines in the south—that is to say, the tribal people do. But the desert people are catching



An Aboriginal concept of the Nativity, and pictures of Pitjantjatjara children taken by Phyl and Noel Wallace







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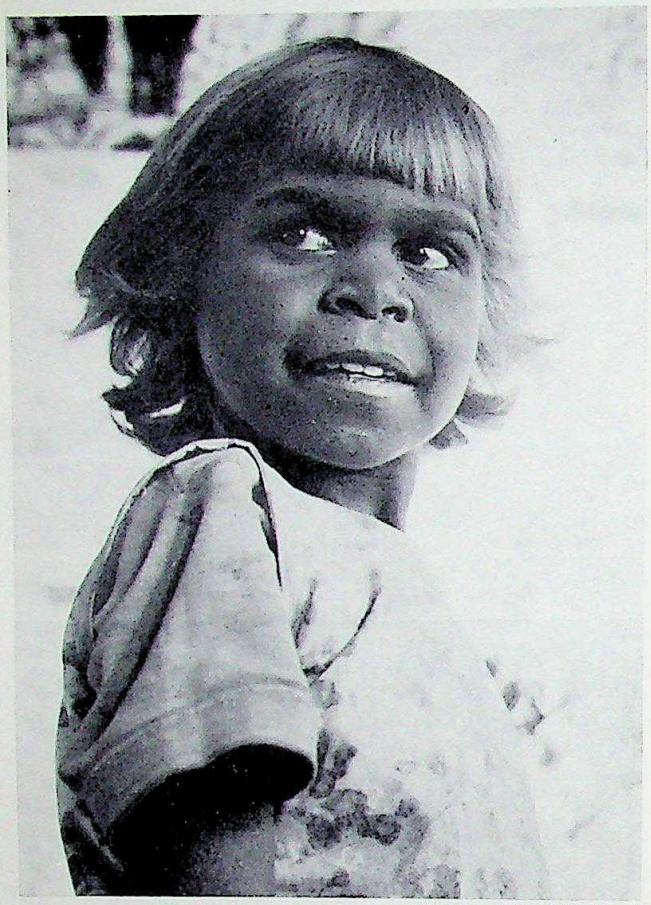
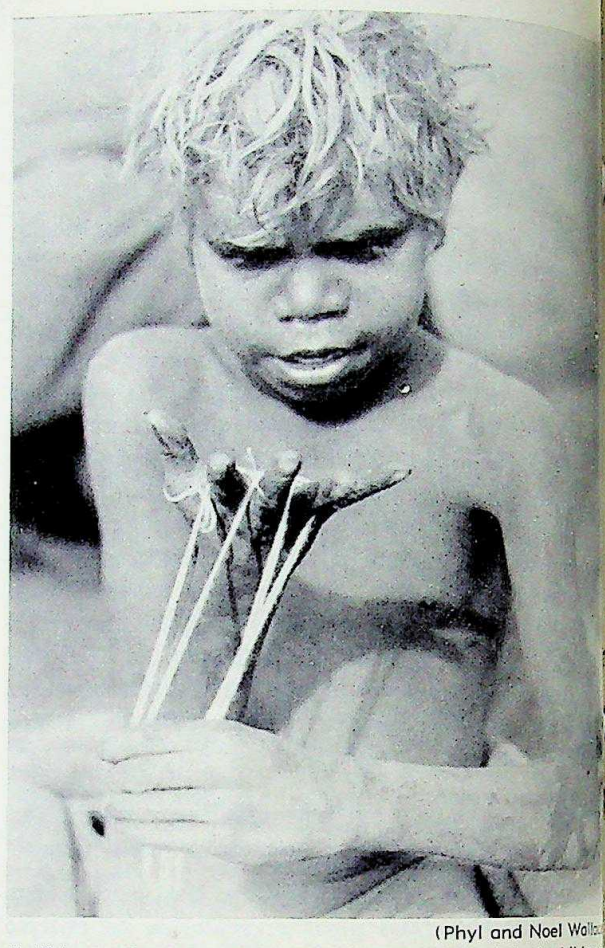


(Phyl and Noel Wallace)
Barbara, a youngster of the Pitjantjatjara tribe.



(Phyl and Noel Wallace)
Ilpilitja playing a favourite game among Aboriginal children — cat's cradle.

up, especially since the Government has been sinking bores; before that, access to water was so limited that settlement in many areas was nearly impossible. They faced a lot of problems: one was that the nights were very cold, and they had to keep warm by covering themselves with a mixture of kangaroo fat and mud, which also served as a protection from mosquitoes. People in the Centre were considered backward, because they had had little contact with Western technology as a result of their isolation and lack of materials. But now they have started to catch up at an enormous rate, and there is little difference between the 'Top End' people—that is to say, the coastal people in the North—and the people from the Centre. Top End people have a longer history of access to European techniques; they are more sophisticated and have a better command of English. Basically, Aborigines in the Northern Territory are very tradition- and tribe-oriented. Curiously, their attitude is very flexible, in spite of the fact that their social organisation is very rigid. If they were not so flexible, they couldn't survive and they could not have adapted as quickly as they have.

What about education along European lines?

First of all, if we define education as school education, priorities among Aborigines are very different from those of the European. Their first interest is land rights, the second one is health, the third may be housing. School education comes to the bottom of the list of priorities for several reasons. School is an imposition from outside, not from their own society; then, to many, it is a symbol of white authority, for behind the teacher is government; so they regard school, not as an agent of their own children's introduction to society but as an activity of the government in their own community. Again, what is being taught in the schools is not always very relevant to their own lives.

But even the children of Australians of European origin are often taught about the Industrial Revolution in Britain or the fight of Queen Boudicca of Britain against the Romans, just as youngsters in South-East Asia under the French learnt a kind of catechism beginning 'Our ancestors, the Gauls . . .'

Yes. There is another thing: the older Aborigines are very religious, whereas the general Australian education system is based on very scientific and technological curricula, and if this were to be taken too far, there would be a risk of destroying Aboriginal society; the Aborigines instinctively know that and so what they want is only to have their children taught reading and writing — English, and numeracy. If more than this is taught there is a lot of resistance — not violent, but passive. Pupils pretend not to understand what the teacher is saying, although they do; another way is for parents

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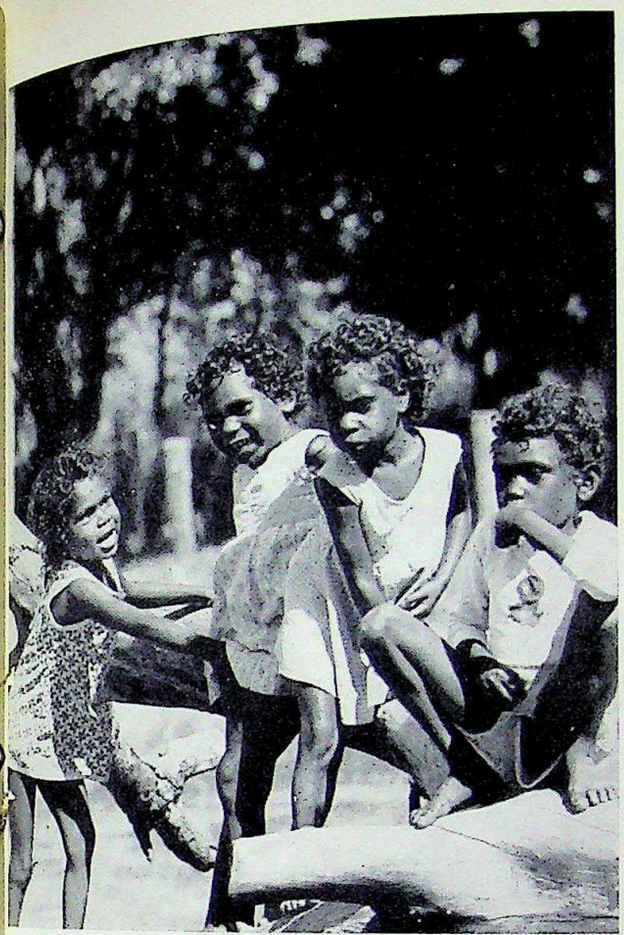
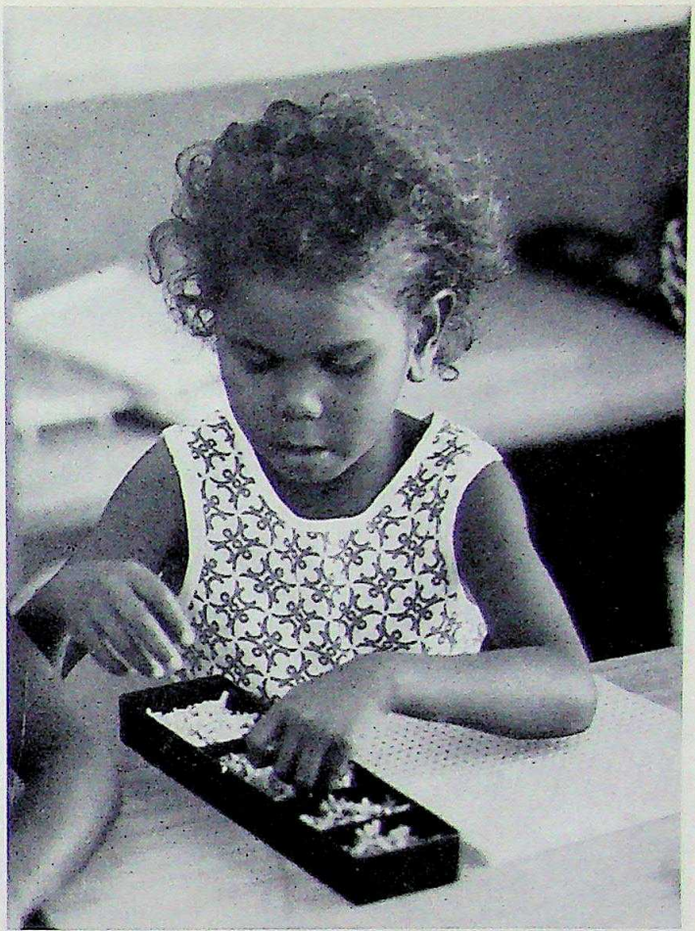


(Alan Fidock)

Children of Elcho Island Pre-school.



(Alan Fidock)

A learner at the Elcho Island Pre-school.

to encourage children to go to school. Thirdly, the hard core of truants apply peer pressure on other youngsters to keep them away from school.

However, many young people, say up to the age of twenty-five, are aware that they cannot return to their traditional way of life. Their hunting skills, their knowledge of animals, are disappearing very quickly and they know they cannot return. In many cases, at least, their spear-throwing is not as good as that of their parents, and they cannot throw the boomerang properly so as to kill the prey. So, many of them depend on four-wheel vehicles and rifles, and realise that in this way they can kill very quickly and effectively, but also that the animals will disappear for ever.

They know that they cannot survive, for the most part, in the traditional way of life, and that they must survive in the Europeanised Australian way of living.

Isn't it a fact, though, that there is a strong movement among Aboriginal people to move back into a more normal way of living in the natural state, in the same way that many other Australians are doing—trying to live off the land?

This is called the out-station movement, or decentralisation movement. I should say that I look at this differently from the way in which an Australian, Aboriginal or European would regard things, because I am a visitor and can look at what is happening from a non-political and unbiased political viewpoint. As a sociologist, I am practical rather than idealistic, so that my views may not be accepted. But as I see it, two things must be considered: one, that the out-station movement is in part due to the fact that since 1973 the attitude towards Aborigines has changed from a desire to see them assimilated to one of wanting them to manage for themselves. So the Government has been trying to restore autonomy to the Aborigines and therefore the Aborigines feel free to take the initiative. There are many reasons why they want to go to the out-stations. Basically the movement stems from an easing of Government policy. Very important also, though not mentioned in most of the discussions, is that from 1954, for about ten years, there was a very savage drought in the Centre, and the Aborigines simply had to retreat before it: for example, in Papunya, about two hundred Pintupi were in the centre of it in 1965 and they could not have survived if they had lived according to nomadic custom. Later, the major change of policy coincided with the rains. However, at the Top End, they had much less than their average rainfall. All the same, the people there were all right, as they had abundant underground water resources. After 1972, the water resources were refilled by rainfall; but, I am afraid that another dry cycle may come. Ted Milliken, of the Darwin

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(James Fitzpatrick, A.

Mount Leopold Ranges in the Kimberley district, in the northern part of Western Australia, not far from the Northern Territory bor

Community College, predicts that the wet cycle is coming to an end.

Now, one of the basic considerations in setting up an out-station is access to water. For example, the Hermannsburg Mission Centre, set up by the Lutherans in 1877, is located on the Finke River—one of the most dependable rivers in the Centre — and, consequently, they could develop eighteen out-stations because of the supply of water along the river. In Papunya, which is about a hundred and eighty miles from Alice Springs, with limited access to water, they have only about five out-stations. In Yuendumu, located at the edge of the Tanami Desert, there is only one out-station, and that is ninety-five miles from Yuendumu. A few more groups want to set up out-stations, but they can't, because there is a lack of water resources.

In many cases, it is feared that the water tables on which out-stations are depending are very limited, and it's therefore important to make sure that there is a very big water table underneath any site on which a sizeable settlement is planned so that about a thousand people could be supported, as at Yuendumu. But a dry cycle could mean that the water basin would dry up within a few years, and the Aborigines would have no other alternative but to return to the settlement. This is why some anthropologists argue that when the older generation has passed away, the younger people will go back to the settlements. But my argument is that even before that they may have to come back, because the dry cycle may start again soon and, according to Ted Milliken, a dry cycle in the Northern Territory follows about eighteen months after a drought in Queensland, and last year there was such a drought.

In spite of these difficulties, are people returning to old crafts and the old ways of living?

One of the motives behind the out-station movement is land rights. My opinion is, and I may be wrong, that many Aborigines feel that unless they are going to live in what they consider their own country, they do not feel at home. Secondly, in a settlement, six to eighteen families can be together who normally would not live in one locality, but they have to, so that the authority of the elders in each family has been lost. In some cases, they want their authority restored by withdrawing from the settlement

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(W. Pedersen, A.I.S.)

Gieke Gorge, in the Kimberley mountain chain.

Thirdly, this living together of several families can lead to a degree of hostility and strain. In the fourth place, they want their children to learn the ways of Aboriginal society. Besides, they want to be in the wild—even young people don't like cities. They say 'Too many people . . . too noisy in the cities, but this is a nice place, always very quiet'. And they need this silence, this isolation.

On top of all that, there's another reason: they want to protect the younger people from the drinking problem. Also, younger people want to show some kindness towards their elders to return the kindness shown to them, saying, 'Let them die peacefully'. Finally, they want to be independent—a feeling which is known to people in other parts of the world.

You can find this also among the Indians and Eskimos in Canada?

I don't know much about Eskimos, but among the Indians up north, I do. In the south, the problem is different. Unlike the reserves here in Australia for Aborigines, Indian reserves in southern Canada are very small, perhaps forty or seventy square miles. But here, in Arnhem Land, the reserve can be as big as thirty-seven thousand square miles. That's a tremendous territory and you can be free in that. But in Saskatchewan, if you drive for ten minutes you're right across it.

And tourists can come and gawk?

That's true. In Canada, you can't withdraw, unless you move up north into the tundra area. There is another difference, though: the reserves in Canada are guaranteed by treaties which the Aborigines here do not have — treaties signed in the 1870s, when Indians in the southern part of Canada signed agreements with the Crown which accorded them their own land, so land rights were established as long as a century ago. All the same, there is no room for out-station movements, except in the north, where, in the Yukon, only a little smaller than the main island of the Japanese Archipelago, Honshu. It has an area of two hundred and seven thousand square miles, with a population only half that of Brunei.

Before governments took an active part in dealing with the Aborigines, most of the work in education and other fields with Aborigines was done by the Christian Church. How does the Aboriginal tribal way of looking at things, of doing things, tie in with the Christian doctrine?

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The different groups vary greatly in their approach. Among the strict ones are the Roman Catholic and Anglican missionaries; at the other extreme are the Lutherans, who are less strongly represented, and who therefore cannot exert as much direct influence as the Churches with more missionaries in the field. At Hermannsburg, which is Lutheran, the Aborigines are taken in but are allowed to do as they wish. The Uniting Church (the new grouping of some Protestant sects) is much closer to the Lutheran Church.

In the 'twenties and 'thirties, the missionaries, particularly in the Centre, set up ration depots, without which many Aborigines would have died. In a very dedicated way, they tried to bring people in to the settlements so that they would not die in the desert. So one of the reasons why the Pitjantjatjara and the islanders could survive was because of the missions.

The negative aspect, if I may say so, is that they insisted that the Aborigines should become Christians. At that time, with the very best motives, both the government and the churches were working towards assimilation, but the Aborigines had to defend their own cultural values and so some of them pretended to adopt the Christian ethic, but only pretended, and later, the missionaries discovered that the Aborigines had kept their own beliefs.

In the fifties, came the Baptists. They very strictly divided Christian and Aboriginal beliefs, and preached the Christian Gospel, but did not interfere in Aboriginal affairs. That is part of the reason why Baptist missionaries are very respected and liked, because the Aborigines appreciated the non-interference. The Lutherans also are taking a very sensible approach.

There was a missionary called Paul Albrecht who got a scholarship to spend 1969 studying community development in India. He learnt a lot from this experience, and told his fellow missionaries: 'Dedicated though they may have been, our predecessors made a mistake; we have gone on making this mistake, of forgetting that we are in Aboriginal land and behaving as if we are masters. We have to restore authority to the people and let them develop their community themselves.'

He had assumed that the Aborigines associated with Hermannsburg Mission, having been involved with the station for ninety years, had formed a community and could run their own business. So, the mission people supported the idea of letting the Aborigines be their own bosses. They were to elect their own people to a town council, an education committee, and take over the Church and the stores. So the Aborigines were persuaded to accept all responsibility, and we, said the missionaries, will quit. In 1972, various committees were elected, and the Aborigines started to run their own business. But, suddenly, fighting broke out, drinking increased and the Europeans were blamed by some. Paul Albrecht felt this accusation was unfair, saying, in effect 'We transferred authority to you and how is it that you hate us a... blame us?'

The reason was not mentioned, but a few months la... they started leaving. One group took its stuff on a tru... and simply drove out, and seventeen other famil... followed their example. Gradually, the mission peop... found out what had gone wrong.

The missionaries had made a second mistake: He... mannsburg was not a community in the European sens... but an accidental collection of families — no more th... that, with a constant undercurrent of hostility, rivalry a... jealousy and so forth. Although they were of one langua... group, the Aranda, they were of different 'families'—so... people would say 'clans', but they call them 'familie... According to their tradition, the head of one fam... should be responsible and have authority among t... members of his family, but he has no authority wh... soever over other families. So, actually, in Hermannsbu... there were more than twenty different groups. Co... sequently, if someone was elected from among the... that person had to be responsible only to his own grou... so they could come to no kind of agreement. Sometim... it seemed as if they had come to an agreement, but ... was never kept. This was all due to their tradition ... social organisation.

The Mission people realised that their approach w... wrong, so that, from that time on, the relationship betwe... the Whites and the Aborigines has become extrem... congenial, positive and constructive and there is love a... repect and mutual trust.

However, at the other end of the scale, even thou... on going to some of the missions run by other Christ... groups, it seems as if all is quiet and tranquil, this ... because of the discipline imposed, and in some cases ... results of this discipline have been acts of violence.

So much for the practical side of mission administ... tion. But did you find any of the Aborigines assimilat... Christianity to their own local and ancient beliefs?

In Yuendumu, Ed Kingston has had a most interes... approach to this. He said to the people there: 'It's y... service, so handle it in the way you like, and I will fo... your directions'. The result was that, instead of sing... whole hymns the way they are in the hymn book, ... congregation picks up one or two lines from a hymn a... chants them in its own way. At Christmas, they d... perform a Nativity pageant; instead of a sermon las... thirty minutes, they draw a very simple design which ... the Christmas story, but in a traditional way.

And what about the schools in which the youngsters ... first taught in their own languages and later in Engli...

I have been to nearly twenty such schools. There ... limitations to this new method of teaching. First, beca... the system has only been in operation a short time, th... is a lack of reading material for the older students. ... the other hand, for the English-language course, th... are millions of books. This can seriously undermine ...

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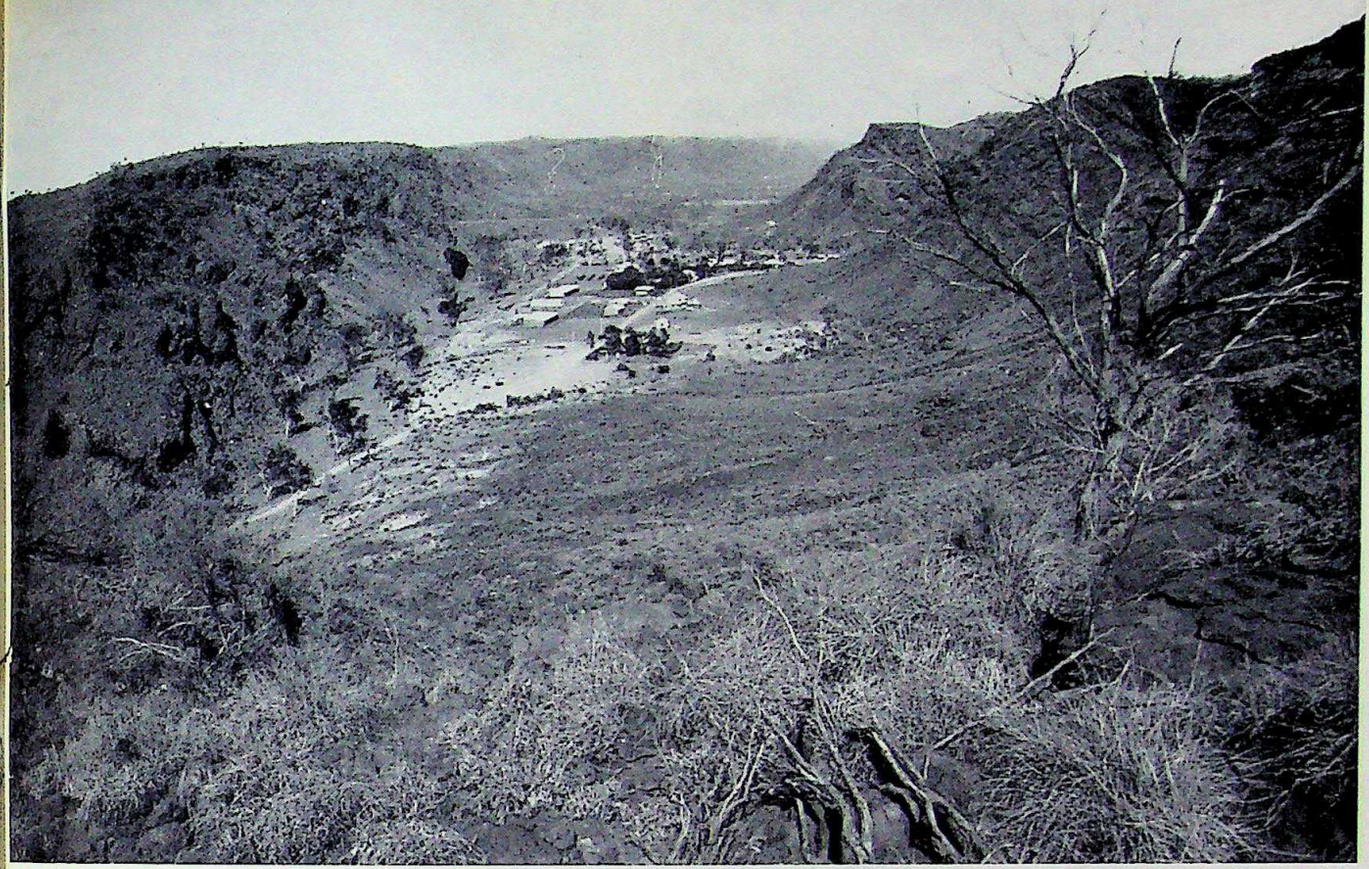

Areyonga Settlement, in the range country, Central Australia. (Robert Edwards)

motivation of people. There is a second limitation. For instance, except for cases such as Angurugu and Areyonga, Bathurst Island or Melville Island, the communities are from different language groups and if the Europeans choose one Aboriginal language for the settlement, then other language groups get annoyed.

The positive aspect that I witnessed in Yirrkala and in many other areas, is that the young people getting instruction in their own language have self-confidence, and easily find respect for their own culture: this is something the Government wanted them to do, but couldn't, before. With the new system of teaching, this respect is being restored.

There is another point which means that full literacy in English cannot be gained overnight, for the difference in structure between English and the Aboriginal languages is so vast that it must take longer, in the same way that it takes a long time for a European to master a language as different from his own as Japanese is, just as it does for a Japanese to master a European language. I'm Japanese by birth, so I know. You can well ask how long it takes for a teacher to learn to speak an Aboriginal language fluently, especially if they stay for only three years. Only a very few people, who have a strong motivation, a lot of aspiration and linguistic training, can do it. On the other hand, English-speaking people tend to assume that English is a very easy language. Teaching English as a second language is very difficult indeed, needing a lot of explanation and the clearest possible pronunciation.

This question of motivation affecting the Europeans' wish to learn an Aboriginal language also applies to Aboriginal youngsters about English, doesn't it? But can't the children be motivated by telling them that if they want to get a job as a mechanic in a garage, say, they must speak English well?

No, not really. They do not assume, as most Westerners do, that everybody has to take a job. In a contemporary technological country such as Australia, the basic idea is that schooling is for a job. Often, teachers are depressed to find that schooling is not considered by the Aborigines as necessarily being training for a job; many of them even wonder why they have to teach Aboriginal youngsters, for this reason. In many schools, still, the curricula are not geared to the needs of the youngsters. For one thing, there are limited job opportunities on the settlement; eighty per cent of the income of the average settlement is from the government, and the private sector provides only twenty per cent, which is very artificial and unnatural. The best place for finding work is on a cattle station, where the young people can expect a reasonable wage, but the number of stockmen is very limited. The labour force is enormous—sixty-five per cent of the Aboriginal population is under twenty, but the job opportunities, as for many young Australians, are very limited.

Can you see that in the long run there will be an increased mixing-in of the Aborigines and European Australians, and a more successful one than there is now?

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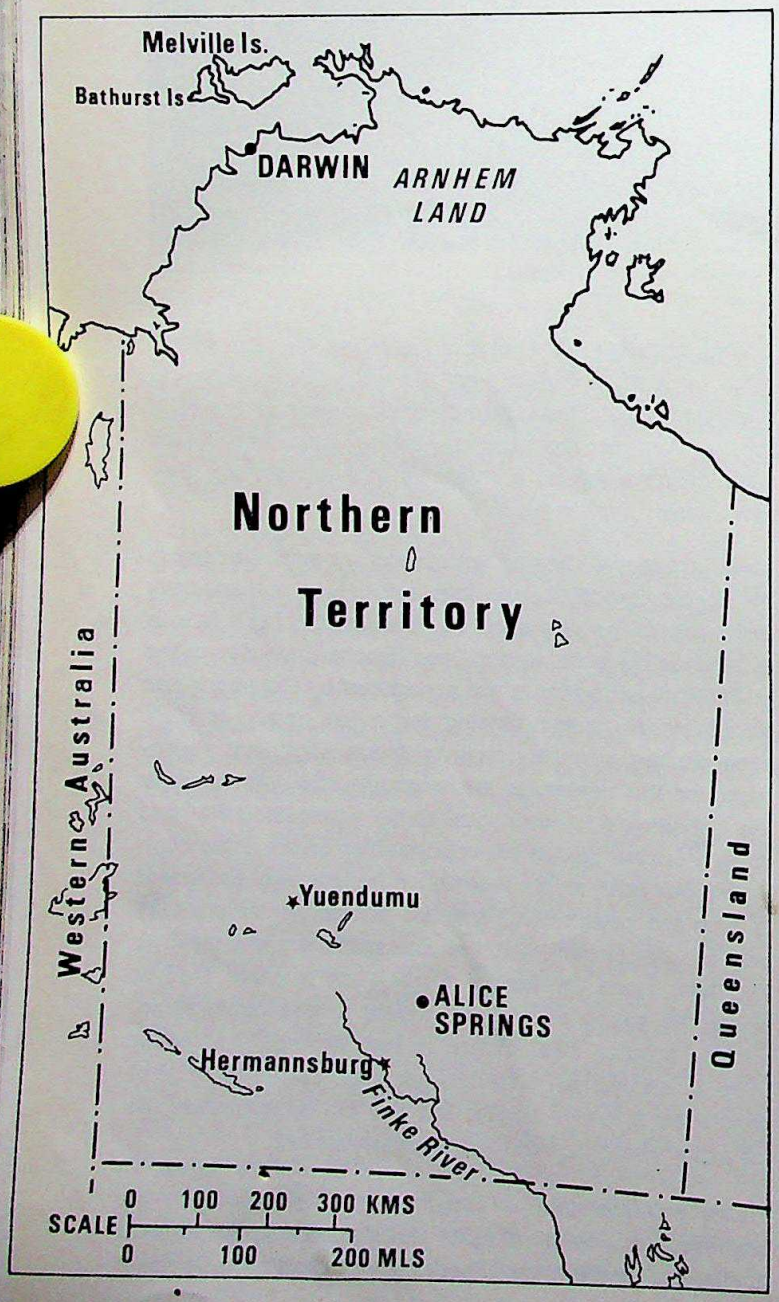
As I see it, the intellectual élite among the Aborigines on the settlements will move to the cities and compete with the rest of the population, but the great majority of them will remain in the settlements, which may become another set of 'poverty pockets' in Australian society. Certainly, among younger people, there is more aspiration to become part of Australian society generally, but older people tend to be afraid of Europeans to some extent. However, these younger people, after they have been exposed to education for thirty years or more, will develop a more realistic view. They will know that they have no way of returning to the way of living of their ancestors, and will adapt.

An article on teaching Australian Aboriginal children in their own languages, by Iola Mathews, was published in HEMISPHERE Vol. 20, No. 12.



POVERTY'S CHILD

Today I have oil in my hair
And food in my belly.
What do I know of all the things
Other boys count their right —
Kites to fly, clothes to wear.
Today my mother washed
A heap of empty egg shells
In hot water, which I drank.
She found for me
Seven newly emptied ice cream cups
I licked them round.
In the garbage heap we found
A little bottle of scented oil.
We could not eat it.
She poured it on my hair.
Today I have food in my belly
And oil in my hair.

—JENNIFER PRABHU

WHENEVER

Whenever, anywhere
A new sword is made,
My heart quivers
with an unknown fear.
Sword, either of paper
or of steel
or of silver
By one way or another —
always reaches the
hands of a killer.
By one excuse or another,
it is always thrust in the heart
of an innocent.
Sword, either of law or of constitution
Sword, either of steel or silver
has never been made with ill-intentions;
And history bears testimony to it,
Sword has never, anywhere, been wielded
by good intentioned man.
Sword is always made with good intentions
But it has always been wielded with bad intentions.
Whenever, anywhere
a new sword is made
My heart quivers
with an unknown fear.

— Translated by D. P. Sinha from original Hindi poem of Surendra Chaturvedi.

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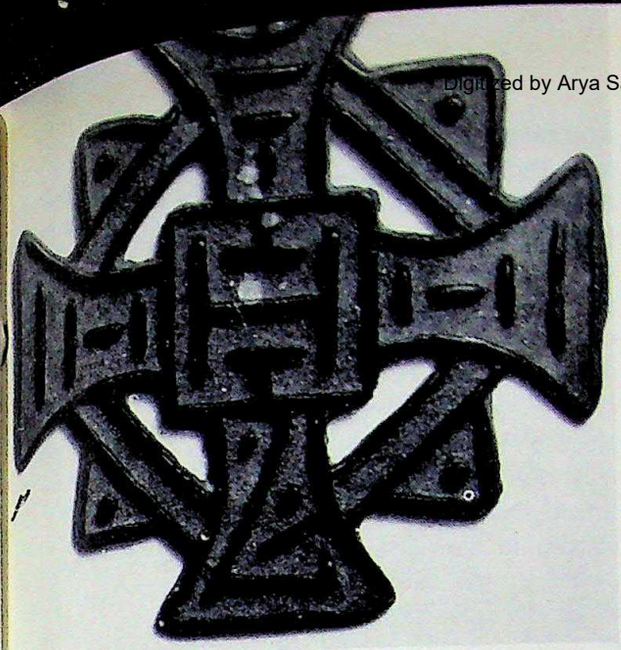


BRIGHT LIKE A PEARL

Brian Colless

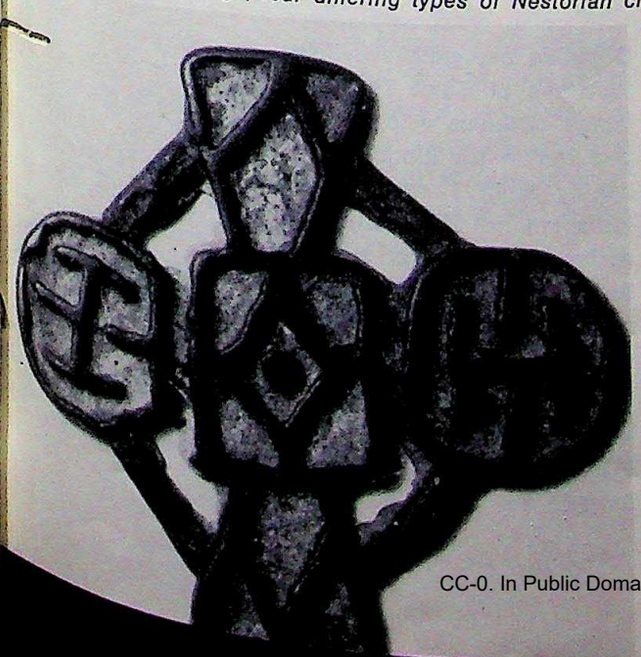
OVER the broad face of Asia, from Mesopotamia, Persia and India, through Turkestan, Tibet and Mongolia, to Manchuria, China and Malaysia, the Christian Cross appears on countless objects surviving from a bygone era: amulets and pendants, rock drawings and manuscripts, gravestones and monuments, all bear mute testimony to the presence of Christians in Asia before the arrival of Catholic missionaries in the thirteenth century.

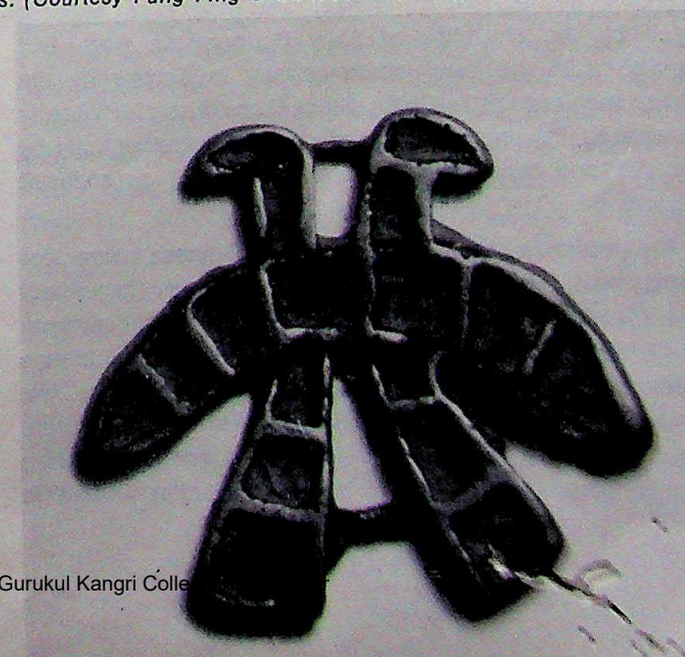
How could Christianity have exerted such widespread influence in Asia without the 'enlightened' European to carry it there? The answer is simply that preaching the Gospel was not the prerogative of the Mediterranean church in ancient and mediaeval times. Christianity arose in Palestine, an Asian country, and from its earliest days moved not only to the West but also to the East; what is more, its eastward expansion was far vaster than its westward spread.

In English history, A.D. 635 is remembered as the year when Bishop Aidan of the Celtic monastery of Iona took the Christian faith to the puny barbarian kingdom of Northumbria. In Chinese chronicles the year equivalent to 635 of the Christian calendar marks the establishment of Christianity in China, the greatest civilisation in the world at that time, by a bishop from Persia. This worthy monk, who became known to the Chinese as A-lo-pen, rode into the capital Ch'ang-an (now Hsi-an) right in the centre of China, carrying in his saddlebags a collection of 'scriptures and images'. The scriptures would have been Bibles, theological writings, and hymn books; the images were probably crosses and perhaps icons too.

This momentous event occurred shortly after the rise of the mighty T'ang Dynasty (618-907), and at the zenith of this period, in 781, the Christian residents of China erected in Hsi-an a memorial to their founding fathers

On this page, four differing types of Nestorian cross. (Courtesy Fung Ping Shan Museum, Hong Kong.)





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A portrait of the Jesuit priest Semedo, who translated the Nestorian Stone in Peking. (Courtesy The British Library.)

and benefactors. It took the form of a tall slab of stone covered with a lengthy Chinese inscription and a supplementary shorter text in Syriac, the dialect of Aramaic used by the churches of Asia. Its contents were first published in the seventeenth century in Europe by the Jesuit missionaries to China. Since then it has triumphantly weathered the storm unleashed against its authenticity by Voltaire and others who unfairly branded it as a Jesuit forgery.

At the head of this tablet nine large Chinese characters announce it as 'a monument on the diffusion throughout the Middle Kingdom of the Brilliant Teaching from Ta-ch'in'. In this title, the term 'Middle Kingdom' means China, of course, while 'the brilliant teaching' (or 'the luminous religion') is Christianity. As for the name Ta-ch'in, it had been used since the time of the Han Dynasty (two hundred years before and after Christ) in reference to the Western world, including West As... In ancient times the peoples of the Roman and Persi... Empires had very limited knowledge of China, but ... least they knew that it produced the lustrous silk th... coveted. For their part, the Chinese believed that Roma... and Persians were bearers of sparkling rarities, such a... exquisite pearls. Naturally, then, the religion brought fro... the West would be one that shone brightly like a pearl.

Accordingly, it is the pearl symbol that holds pride ... place on this monument. To be sure, a large cross (of t... type that is called Maltese in European parlance, a... which also happens to be the characteristic Asian for... surmounts the superscription; but the round object d... picted at the very top of this stone is surely a pea... while the cross itself is encircled by twelve pearls, a tr... of them standing at the end of each of its four arms.

The parable of Jesus about an earnest merchant and ... pearl of great price was a favourite among the Christian... of West Asia, prone as they were to undertaking com... mercial ventures that led them far afield. Missionaries wh... accompanied their trader compatriots from Syria, Meso... potamia and Persia likewise considered themselves to be... merchants of the precious Pearl, as carriers of the Gospel.

Ephraim Syrus, the fourth-century poet of the Persia... Church, wrote a series of hymns in which the pea... symbol is given its apotheosis. The Pearl is the Gospe... as well as the living Christ, and also the pellet of whi... eucharistic bread given to partakers of Holy Communio... Alluding to bearers of this trophy of faith, Ephraim sing... his praises to the Pearl: 'They went forth as paupers ... amidst the merchants to show their new wealth; and in... the palms of men's hands they placed thee as th... medicine of life'.

Ephraim was connected with Edessa* and Nisibis, tw... major cities of the lands around the Tigris and Euphrates ... Rivers. They became centres of Christian scholarship ... where Greek ideas and books were rendered into Syria... translation. Out in the deserted areas of West As... monasteries sprang up as training grounds for ascet... ascetics, athletes of God who often chose the rigours o... missionary travel to India and China as their means o... spiritual exercise.

In going on such journeys to the Indies, these Easter... Christian evangelists believed they were following in th... footsteps of Saint Thomas, the doubter among the ... ciples of Jesus who became, according to strong Syria... and Indian traditions, the Apostle of Asia. The legend... linking Saint Thomas with the founding of churches ... India are not inherently improbable, given that the trad... routes by land and sea between western and southe... Asia were well established by his time, the first centur... of the Christian era. But in the absence of incontrovertible... evidence historians have been reluctant to accept them ... as factual.

** See the author's article 'City with Many Names', in HE... SPHERE Vol. 19, No 3.*

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However, even without apostolic or other missionary activity, in the early centuries of our era there would have been West Asian Christians visiting and inhabiting South Asia for mercantile purposes. Silks of China and spices of Indonesia enticed merchants from the Persian Gulf to the trading ports of India and Ceylon. In the sixth century an anonymous Christian trader and author from Alexandria, whose *Christian Topography* has been preserved under the name Cosmas Indicopleustes, knew from inquiries made on his voyages around the Arabian Sea that there were churches of Persian Christians with their own clergy in Ceylon (Taprobane, now Sri Lanka) and India, more particularly at Kalliana (near Bombay on the Konkan Coast) and the pepper-producing Malé (presumably on the Malabar Coast). He also knew that the region where cloves grew (the East Indies) lay far over the Indian Ocean; and after that came the land where silk was produced, Tzinista (China); but he could not say whether Christians were to be found in those distant parts at that time.

From our vantage point in history we are still no better informed on this question than Cosmas was, but we are at least able to affirm that before the middle of the seventh century Christians were definitely settled not only in China, as we have already seen, but also in South-East Asia. As was the case in India and Sri Lanka, most of the Christians would have been members of the Persian Church and therefore 'Nestorian' Christians.

In 431, Nestorius, the Archbishop of Constantinople, had been banished for his heretical interpretation of the relationship between the divine and human natures of Jesus. Controversies of this kind were racking the church in those days, and it seems that political rivalry rather than theological concern was the major motive in the debate. At that time the Church of the Persian Empire was undergoing one of its regular periods of persecution at the hands of the Sassanian and Zoroastrian rulers of Iran. One reason for this cruel purge of Christians was their connection with the Roman Empire, which was now a bulwark of Christianity. Hence, the latter years of that terrible fifth century saw the Church of Persia proclaiming its independence under the leadership if its Patriarch or Catholicos, residing at Seleucia-Ctesiphon on the Tigris. Hereafter this church was to be stigmatised by Western Christendom as 'Nestorian', because it was associated with teachers who held opinions similar to those of Nestorius. However, Nestorius was certainly not its founder, and in fact the name 'Nestorian' was rejected by the Persian Church. It called itself simply and rightly the Church of the East.

That it was indeed the church of the whole orient stands as a fact of history. The Pope in Rome, for most of the Middle Ages, did not have jurisdiction over the ecclesiastical provinces of Turkestan, Tibet, China, India, and Java, but the Patriarch of Seleucia-Ctesiphon regularly ordained metropolitan bishops for those far-flung realms of Asia.

A group of disciples, including St. Thomas who propagated the Christian faith in Asia, with Christ. (From an ancient manuscript, courtesy The British Library.)

However, this large array of archdioceses was difficult to govern. For example, in the middle of the seventh century a dispute came up between the Catholicos of the Church and the Metropolitan of Rev-Ardashir, who was threatening to secede and to take with him the churches of the Persian Gulf and India. The Patriarch managed to heal this rift, and from the letters he wrote in this regard an important piece of information emerges.

India is there defined as stretching from the maritime borders of the Persian Empire to the country called Qalah. This is surely the Kalah described by mediaeval Arab geographers as a tin-producing region, situated on the western coast of the Malay Peninsula and probably to be located at Port Kelang, which is today the gateway to Kuala Lumpur and Malaysia's most productive tin-fields. While no Christian relics have been found in this area, other sites along the Malacca Strait have at least yielded glass objects, lamps, and coins which have clearly emanated from West Asia. These places are Takuapa in southern Thailand (once the great emporium known to the Indians and the ancient Alexandrian geographer Ptolemy as Takkola, and to the mediaeval Arabs as Qaqullah) and Pengkalan Bujang in the Malaysian state of Kedah.

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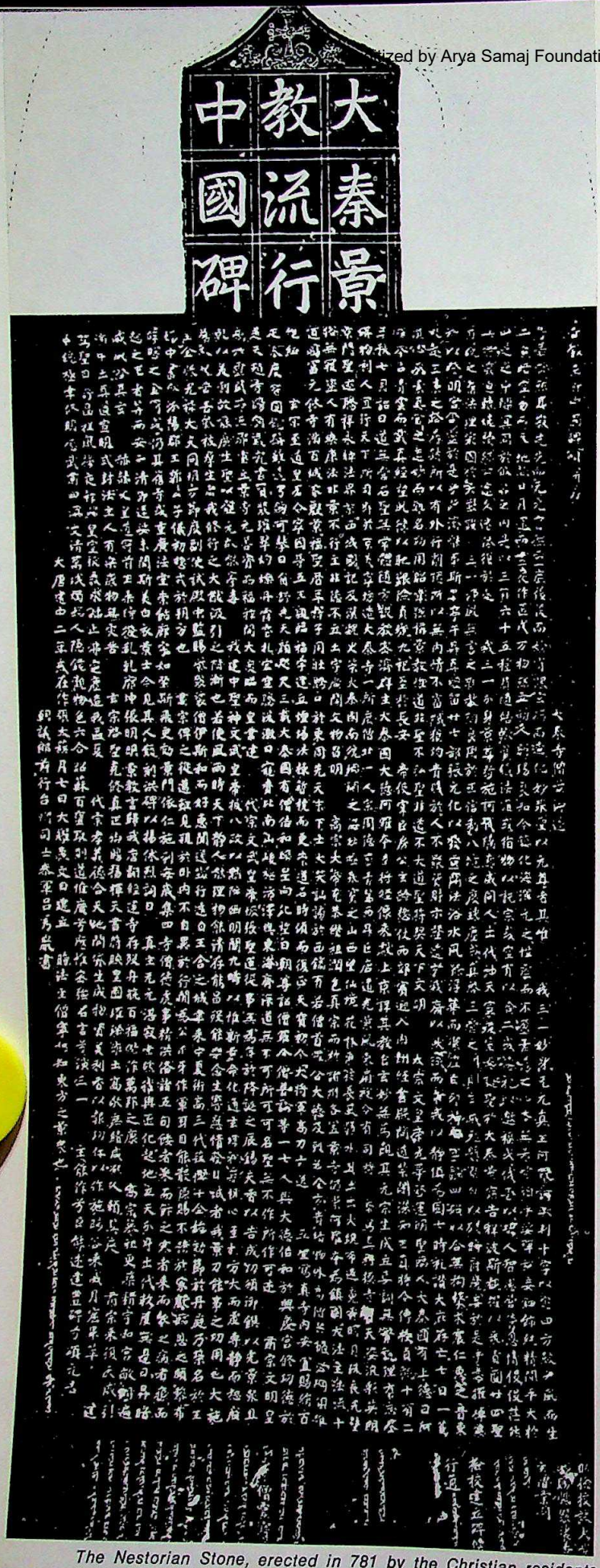

The Nestorian Stone, erected in 781 by the Christian residents in China at Hsi-an, as a memorial to their founding fathers and benefactors, inscribed in both Chinese and Syriac. (Courtesy National Library of Australia.)

It is the celebrated town of Malacca, however, t... boasts the most intriguing piece of evidence for ea... Christianity in Malaysia. Founded about 1400, Malac... flourished throughout the ensuing century as a centre ... international trade and Islamic religion. The Portugue... wrenched this prize from the grasp of the Malays in 15... and occupied it until 1642. Early in the seventee... century, some workmen digging in the grounds that h... formerly belonged to the Sultan of Malacca uncovered ... small subterranean building, apparently a hermitage ... an oratory. From it they withdrew a somewhat corrod... copper cross set on a square piece of marble. Here w... clear proof that Christianity had existed in Malacca befo... the coming of the European, but the cross is now lost a... its origin remains a mystery. The Portuguese chronicl... Eredia, who recorded its discovery, thought it might ha... been taken there by a Saint Thomas Christian from Sou... India, or else, we may add, by some West Asian prie... or monk.

A traveller's anecdote from the fourteenth centu... indicates that there were Christians living in eastern Ja... at that time, in the capital city of Majapahit. Recountin... his adventures in Java (or Saba, as he calls it), the Pap... Legate, Giovanni de' Marignolli*, reveals that there we... a few Christians in that kingdom. These were probab... the source of his belief that the Magi had set out fro... that island to make their way to Palestine at the time ... the nativity of Jesus. If this opinion was given credenc... we should need to alter our image of the Three Wise Me... following the star to Bethlehem on camel-back, for in th... view the greater part of their journey would have bee... on a sailing ship rather than on 'the ship of the deser... However, what it probably means is that the Christie... Marignolli met in Java were Persians, who had transferre... their traditional tales from an Iranian setting to their ne... Indonesian home. Furthermore, we know from Nestorian ... ecclesiastical texts that the islands of Dabag (represented ... Javaka and probably meaning the Malay Archipelago) ... constituted one of the domains of the Church of the Eas... right into the sixteenth century.

By 1503 the Dabag islands had been joined with Ind... and China in one immense Far Eastern province, a su... sign of serious shrinkage in the number of church mem... bers. In fact, an aggregate of factors had brought abo... the ruin of the Nestorian Church in Central Asia ... China: the Black Plague, which ravaged Eurasia fro... the Pacific Ocean to the Atlantic; the complete acce... ance of Islam by the Mongols and Turks of the weste... half of Asia; the conversion of Mongolia to Buddhis... and the nationalism of the Ming Dynasty after the exp... sion of the Mongol Khan and his Christian supporters ... 1368—all these causes combined to annihilate East As... Christianity, both Nestorian and Catholic, during t... fourteenth and fifteenth centuries.

* *See Dr Colless' 'The Travels of Marignolli', in HEMISPHE... Vol. 17, No 9.*

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Meanwhile, in South Asia the Saint Thomas Christians and their Nestorian bishops had to face an onslaught of Portuguese inquisitioners and proselytisers in the wake of Vasco da Gama. The Synod of Diamper in 1599 compelled the Christians of India to forswear allegiance to the Nestorian Catholics and to unite with Rome as Uniat Syrian Christians. It was late in the fifth century that the Church of the East had declared itself independent, and now at the close of the sixteenth century its last mission field was taken away from it. Subsequently, some groups of Indian Christians went over to the Jacobite or Syrian Orthodox Church of Antioch, while others came under the influence of nineteenth-century Protestant missionaries and formed the Marthomite or Mar Thoma Syrian Church of South India. A few congregations of the Church of the East linger in Kerala as witnesses to its past glories in South Asia.

At the same time, back in the Tigris-Euphrates homeland of the Nestorian Church, the Patriarch saw his little flock heedlessly scattered by foreign missionaries and severely persecuted by neighbours in Turkey, Iraq, and Iran. For these reasons, the Catholicos has had to change his residence frequently and in the end to take refuge in America, in San Francisco. In an endeavour to restore some measure of self-respect, his followers had begun to call themselves Assyrians, thereby taking on an identity that extends back to the Assyrian civilisation of Biblical times, which occupied the area of Mesopotamia from which so many of them have emigrated. The name 'Assyrian' serves to distinguish them from the 'Chaldeans', the Uniat Catholic remnants of the Nestorian Church. These Assyrian Christians still retain the title 'Church of the East', and they have an Australian branch in Sydney.

As far as we can tell, America and Australia were not touched by the mediaeval Nestorian missionaries. But throughout Asia the relics of these intrepid travellers and of their converts and churches are constantly coming to light: on the golden road to Samarkand, on the steppes of Central Asia, on the very rooftop of the world in Tibet, in the Yellow River Valley both within and without the Great Wall of China their memory remains in abandoned cemeteries and ruined edifices.

In the Middle Ages, Marco Polo and the Catholic churchmen who came after him marvelled at finding so many Christians and churches in the settled towns and nomadic camps along these endless tracks. Today Western Christians need to be reminded again that what they have so blithely dismissed as 'the Nestorian heresy' was once the Church of the Orient.

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Scenes at a communion service at the place of worship of the Assyrian Church of the East in New South Wales. (Photographs, Australian Information Service.)

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A bull elephant seal at rest.

LEFT ALONE

John K. Lin

RISING out of the vast Southern Ocean like some sea monster, Macquarie Island is but a tiny speck between New Zealand, Tasmania and Antarctica. Yet this small island is the home of millions of birds and seals seeking a landfall to rest and raise their young.

Long before its discovery in 1810* and in recent decades, Macquarie Island has provided nesting and breeding sites for dozens of sea bird and mammal species. After a century of rapacious slaughter of the fur seals, elephant seals and royal and king penguins, Macquarie Island was declared a sanctuary in 1933 by the Tasmanian Government on the strong recommendation of Sir Douglas Mawson. A party of five from his 1911-1914 Australian Antarctic Expedition (AAE) had spent two years on Macquarie Island surveying and mapping its geology a sending weather information back to Australia by mea of radio.

Within ten years of its discovery the fur seals had bea decimated as tens of thousands of skins were remov by each of many ships employed in the lucrative seal trade. Then followed the exploitation of the elephant se herds for their oil until, by the end of the ninetee century, they too had been reduced to a mere fract of their original teeming abundance. After the elepha seals came the royal penguin flocks and, finally, t crowning tragedy: the king penguins were fed into t furnaces and try-pots for their oil.

Today all but the fur seals have recovered to appro mately their former numbers. Only a few hundred N Zealand fur seals, *Arctocephalus forsteri*, now breed the island. It is not even known if this is the species th

** See 'Ships, Storms and Sealers', a review by Harry Black in HEMISPHERE, November 1974, for a brief history of Macquarie Island.*

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was, it seemed, wiped out by the sealers a century and a half ago.

Another legacy from the sealing gangs that has had a profound and lasting effect upon the island's vegetation and ground-nesting birds in particular is the number of introduced animals: wekas, rabbits, rats and cats (dogs, sheep, cattle, goats and horses were also introduced but have long since died or been shot out). There are signs all over the island of erosion and predation by these marauding intruders; their activities disturb the fragile soil and kill defenceless birds.

Biologists of the Australian National Antarctic Research Expeditions (ANARE) have been studying the animal life of Macquarie Island since 1949, when the first expedition established a station at its northern end. The station has since been manned continuously. While the biologists have studied the vegetation and lakes, the birds, seals and shore life, physicists, geologists and meteorologists have investigated the upper atmosphere, the earth's crust and the weather.

Macquarie Island is a basaltic mass rising steeply to a plateau some two hundred metres above sea level, with a high point of about four hundred and fifty metres. Much of the island comprises sheer cliffs which provide nest sites for a number of species of albatrosses. There are extensive beaches of coarse sand and shingle where the elephant seals haul out to breed. Beyond many of the beaches are areas of tussock grass where older elephant seals gather to moult. Fur seals inhabit rocky headlands which give them easy access to the water.

The most elegant residents on Macquarie Island are surely the king penguins, *Aptenodytes patagonica*. These proud and stately birds stand about sixty to seventy centimetres tall and weigh five to eight kilograms. There are about ten thousand pairs, and they breed during the southern winter, about halfway down the eastern side of the island. Each pair produces one chick, which is fed by both parents for several months while the fluffy down gives way to the first plumage of short, spiky feathers; these are adapted to keeping the birds dry and warm.

Like all penguins, the king penguins cannot fly, but they are strong swimmers and expert at catching shrimp-like krill. The parents disgorge a sticky reddish mass of partly digested food into the chick's ever-receptive and apparently insatiable gullet.

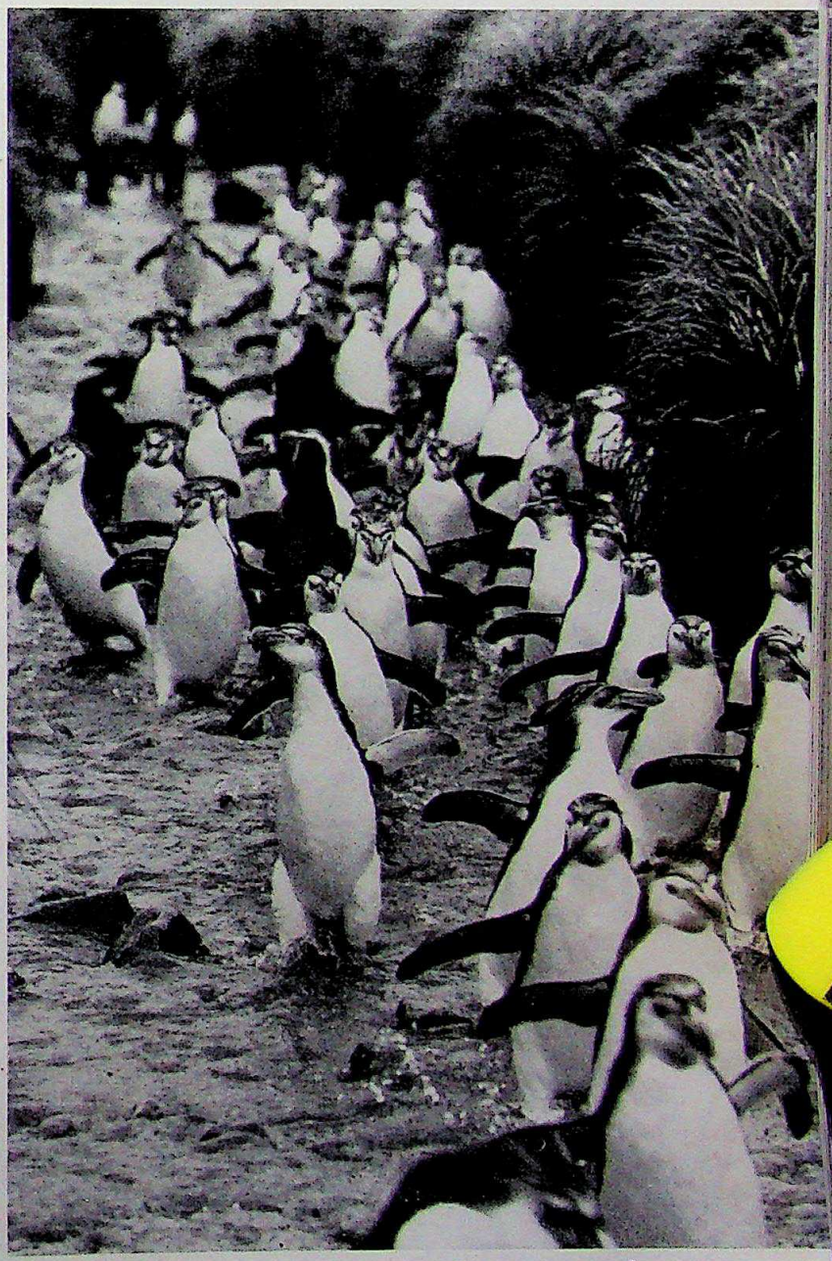
Around March the adult plumage loses its sheen and smooth texture as the annual moult begins. King penguins gather in small disconsolate groups among the tussock grass, seemingly afraid of being caught while their old feathers are lost. Then the white shirt front, silvery-blue coat, golden cravat and head stripe are revealed once more, and reach their full glory just before the next breeding season.

The royal penguins, *Eudyptes chrysolophus schlegeli*, are now believed to number up to three-quarters of a million birds. They gather in a huge rookery at Hurd Point, the southernmost part of the island, and in a couple of smaller colonies on the east and west coasts. In the later days of the sealing gangs, these birds were boiled down for their oil or simply cast into the fires as fuel for the digesters used in rendering elephant seal blubber into oil.

The royal penguin is smaller than the king: it stands about fifty to sixty centimetres high and weighs three or four kilograms. It has a short, thick beak, a vivid golden crest and the usual penguin 'uniform' of white front and blue-black back. Royal penguins breed later than king penguins. The single egg hatches in September but, if an early egg fails, there may be time for a second to be laid and hatched successfully.

Penguin nests are rather simple affairs of only symbolic dimensions — a few pebbles and grass stalks heaped together. They provide loot for neighbours to rob and

Penguins wading along a creek bed on their way to the sea.



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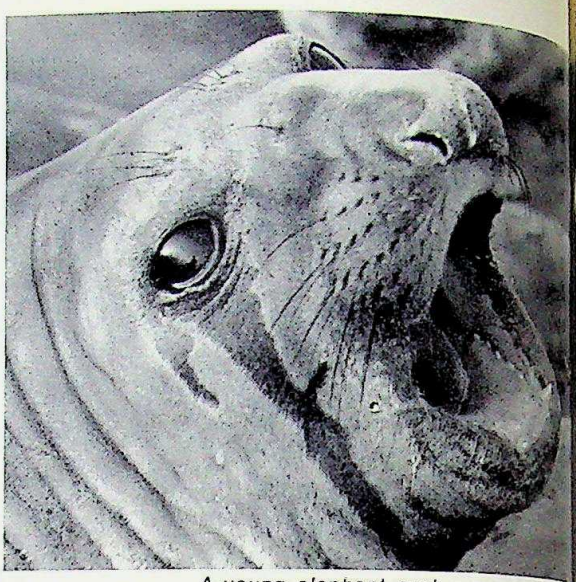
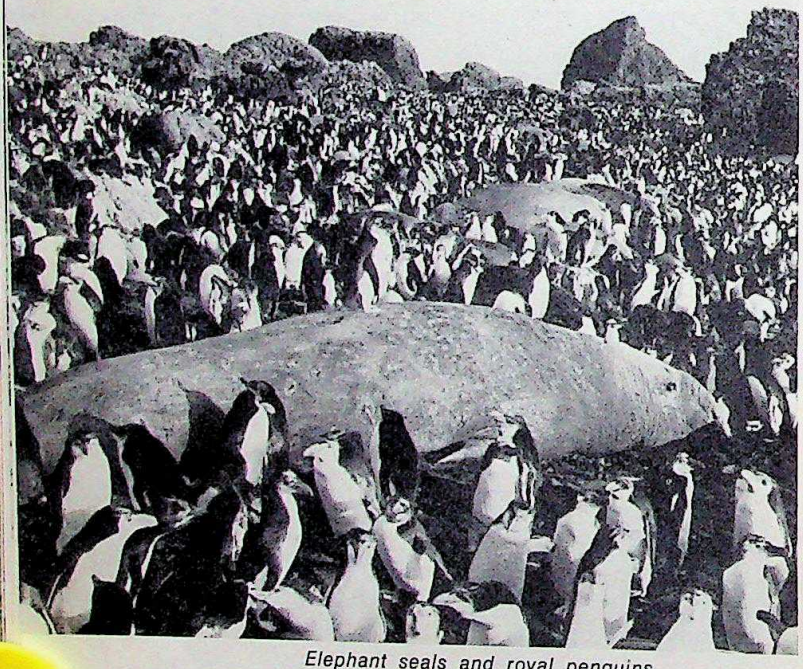
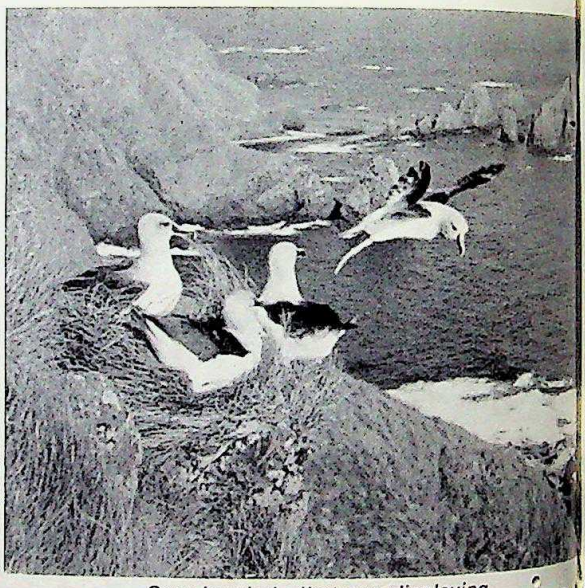
An elephant seal pup.



A young elephant seal.

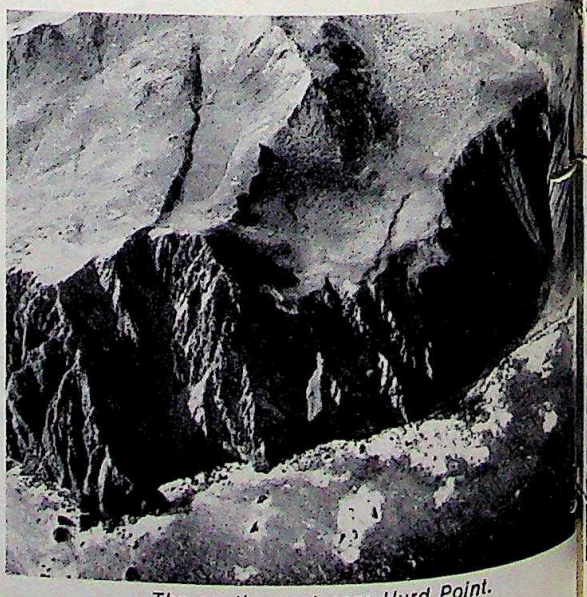


Elephant seals and royal penguins.



Grey-headed albatross displaying.

Young elephant seals.



The south coast near Hurd Point.

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present, like a dowry, to their partners. The breeding rookeries develop from the centre outwards and up the slopes of the plateau. Predatory skuas skirmish at the periphery for unattended chicks, many of which are later hatchings and weaker starvelings. Survival is for the fittest.

The chicks moult their down towards the end of the southern summer, and the adults change plumage a little later again. Then they begin to leave the island to spend the next several months at sea. The breeding birds (four to five years and older) return in late August to establish nest sites.

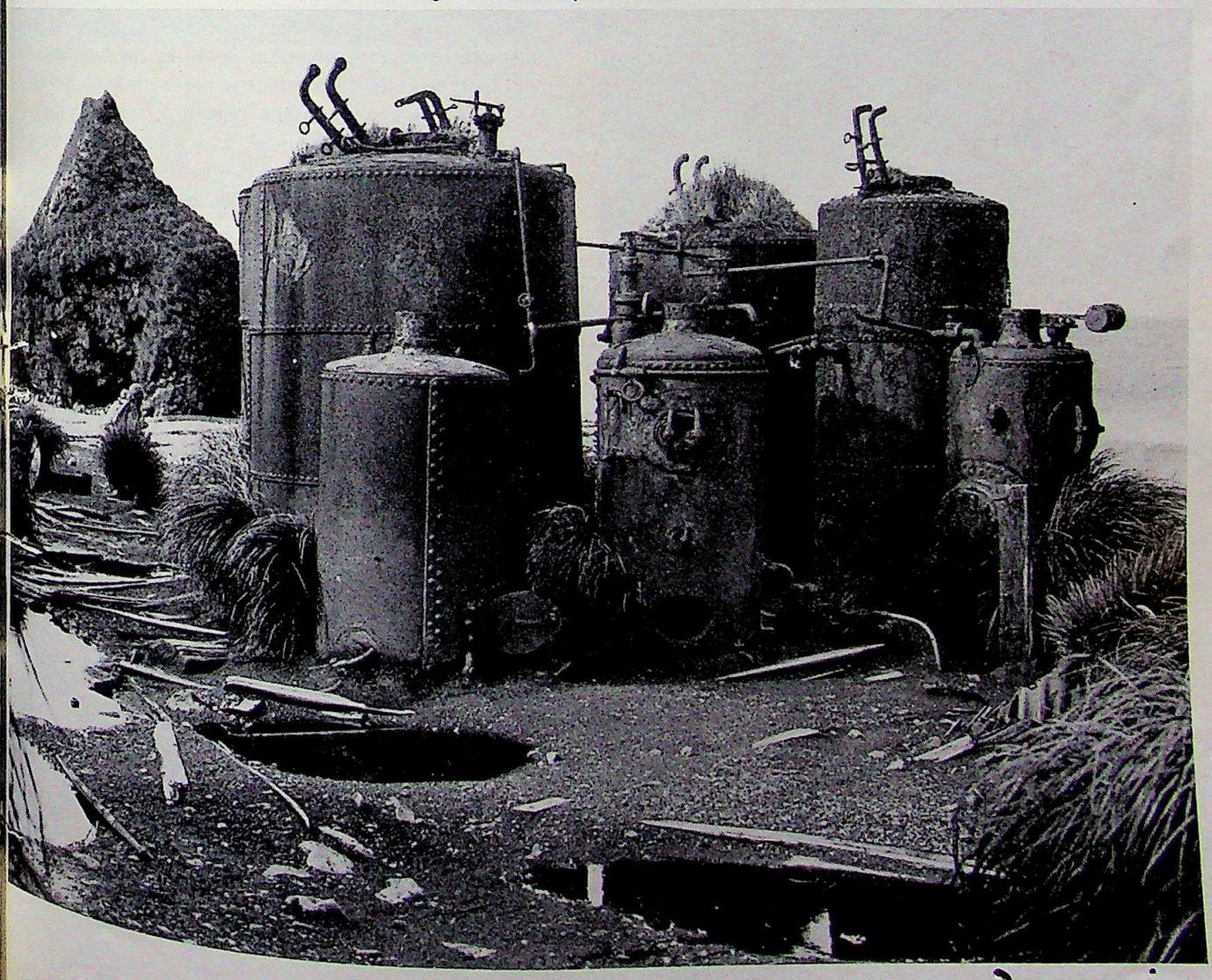
More than a hundred thousand elephant seals, *Mirounga leonina*, not counting pups of the year, come ashore at Macquarie Island at various seasons to breed, moult or simply rest. They are the dominant animals on the island, hauling out in ones and twos or great aggregations numbering thousands along its beaches. A third of the entire population visits the northern end of the island adjacent to the ANARE station each year. Large numbers, marked as month-old pups, have been kept under close observation for a dozen years or more. The southern elephant seal now ranks as one of the world's most intensely studied species of wild mammal.

During the breeding season the large bulls or beach-masters control harems numbering hundreds of cows. They spend their time warding off challengers with hoarse bellows, charges and bloody but rarely fatal combat. Males mature at about ten to twelve years, when they may have reached six metres in length and over three thousand kilograms in weight. Females mature at four to seven years, weigh about three hundred kilograms and attain a length of three metres.

Black-coated pups are born during September and October. At birth they tip the scales at about forty kilograms, but after less than three weeks of suckling they may be three to four times their birth weight. At this stage their mothers, already mated again, leave them. The pups' black natal fur is replaced after about three weeks by a short, silver-grey coat. They remain ashore for several more weeks, fasting and learning to swim, and go to sea for the first time when about ten weeks old.

Immature elephant seals of both sexes come ashore to moult in December and January, the older cows in February, and the bulls in March and April. After the moult they all go to sea until the next breeding season in spring.

Boilers and digesters used by the sealers before the ban.



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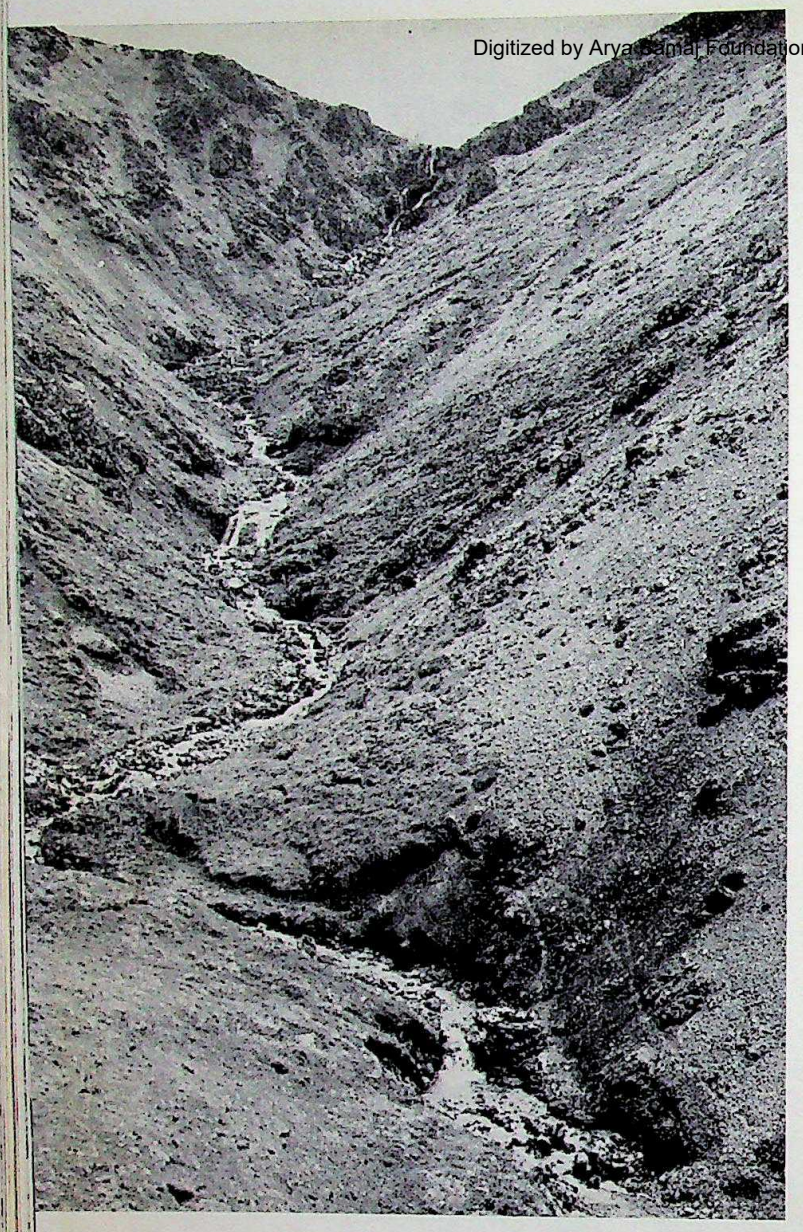


Albatrosses, petrels, gulls, terns and fur seals al
breed on the island, safe from predators and close
abundant sea foods. All except the fur seals are astonis
ingly fearless of man. Their tameness, large numbers a
regular cycles make these animals ideal subjects f
intensive study.

Giant petrels—'nellies' or "stinkers', depending on
point of view—and skuas are the scavengers of Macqua
Island's beaches. They clean up seal carcasses a
other carrion, as well as snatching unguarded or weakl
chicks from the numerous rookeries. Skuas and petre
breed on the plateau, in contrast to the many cliff-nest
albatrosses and the penguins which breed on the beache
or among the tussocks.

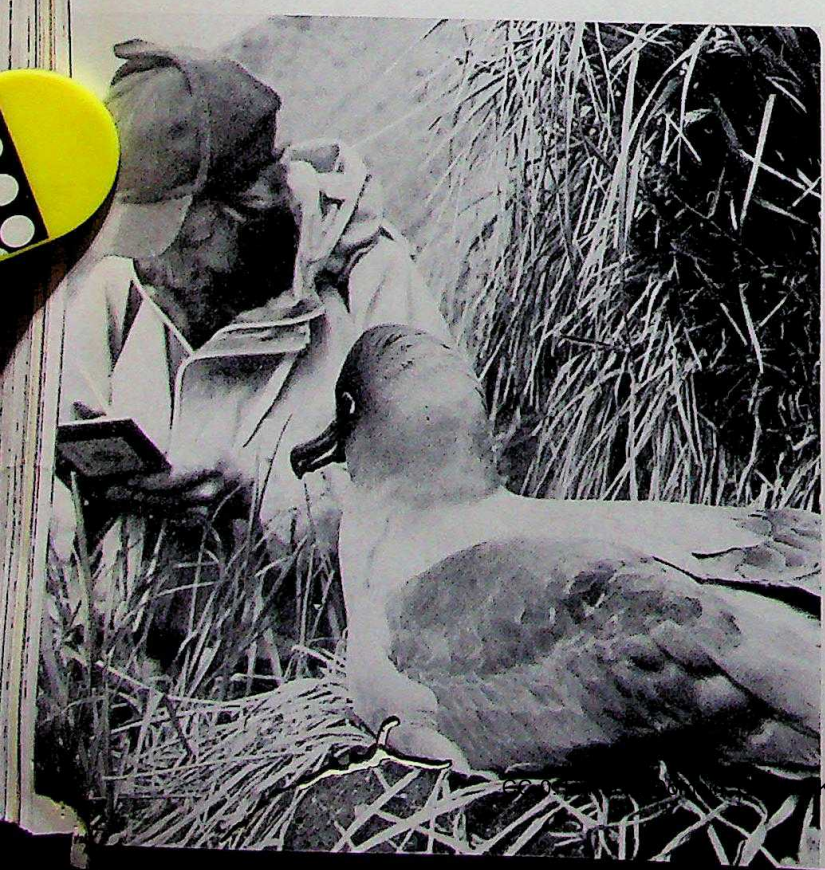
The giant wandering albatross also nests on terra
below the plateau. These terrestrially ungainly birds b
come airborne with a running-flapping motion, but onc
aloft and over the sea they cruise effortlessly with hard
a wing-beat. They soar and glide, using only the a
currents.

Macquarie Island receives occasional visitors from th
Antarctic continent and islands to the north and west
Leopard and, more rarely, Weddell seals haul out on th
beaches for a few days far to the north of their Antarcti
home. Sea lions from some of New Zealand's sub-Antarcti
islands come ashore to rest for several weeks alone in th
tussocks or among elephant seals on the beaches. A f
seal from the Isle de Kerguélen, far to the west, has visite
the island. Antarctic Adélie penguins, sub-Antarctic chi
strap and crested penguins, and a number of migrator
birds from the northern hemisphere also turn up at oc
times — especially after storms or when disoriented b
fog.

All the animals of Macquarie Island depend on the se
for their food. They are not as well adapted to land a
to the air or water, where their true abilities are displaye
as, individually, they exploit the ocean. On land, however
to which they must return at least to breed, their shee
numbers, size or beauty dominate the scene.

Numerous small island havens like Macquarie a
scattered around the sub-Antarctic regions of the globe
Each has a similar fauna, differing only as to specie
of some forms. On their lonely beaches and slopes
undiminished animal populations survive and multiply

THE AUTHOR: *Dr John K. Ling, Director of the South Australia
Museum, has travelled widely in Arctic and Antarctic region
He spent two summers on Macquarie Island, studying t
biology of elephant seals, for which he received his doctora
from the Australian National University.*



*An eroded valley, heavily grazed by introduced rabbits, and
scientist checking the nest of a light-mantled albatross.*

A lonely light

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A lonely light-mantled albatross on the nest, and the biggest penguin colony in the world, peopled by royal penguins, at Hurd Point. (Photos, courtesy Antarctic Division, Department of Science.)

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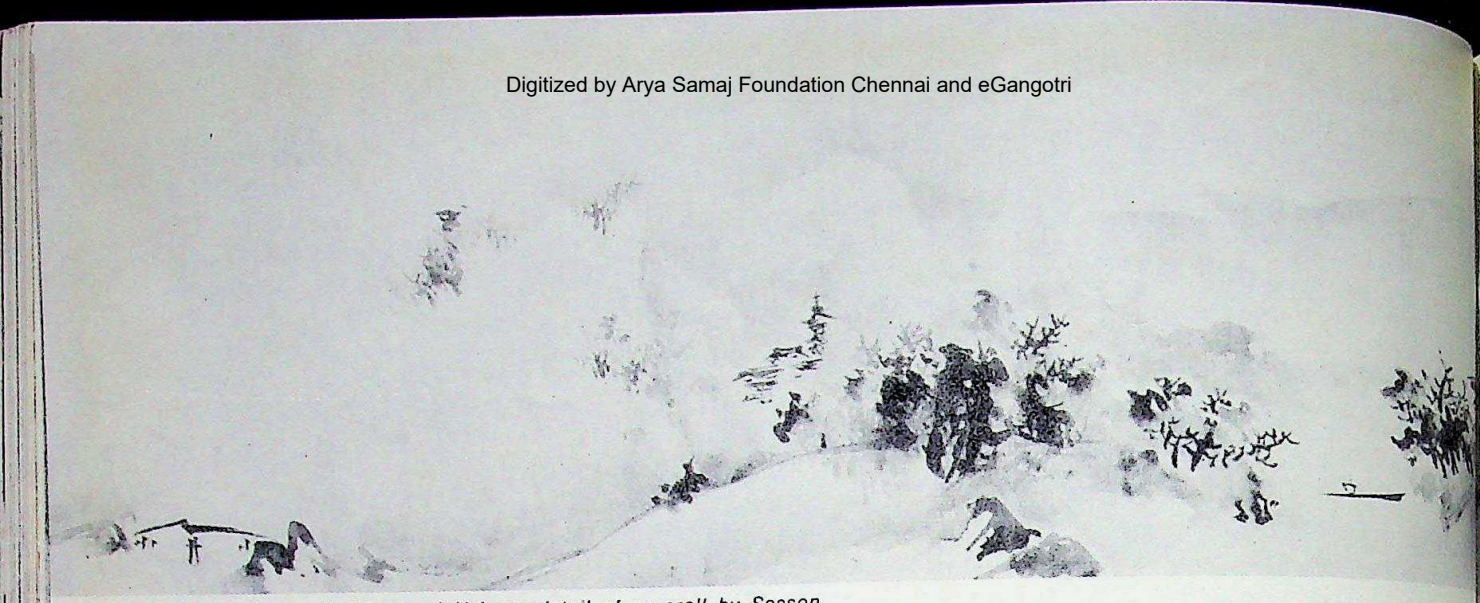

Eight Views of Hsiao and Hsiang, detail of a scroll by Sesson (1504-1589), Masaki Art Museum, Osaka.

JAPANESE INK PAINTINGS

LOOKED at from the knowledgeable safety of the d
tance of a few centuries, it seems only a logical step f
the Japanese, especially, to have gone from their cursiv
gracious script to actual painting with the writing-brus
even more logical, in some ways, than for the Chines
from whom the Japanese learned much of this art, b
whose picture-writing had become so formalised. But
both cases ink-painting was developed to a form o
expression that has scarcely been equalled for delica
and strength of line, subtlety or fierce emphasis, intens
drama or repose.

*Japanese Ink Paintings from American Collections: Th
Muromachi Period* is probably the ultimate in *catalogue
raisonnées.* Published by the Art Museum of Princet
University (ISBN 0 691 03913 5), its three hundred pag
of generous format not only provide a wide-rang
general introduction by Yoshiaki Shimizu and Caro
Wheelwright of the Universities of California and Princet
respectively, who have edited this handsome volume, b
brief monographs by experts on about forty ink paintin
in public and private collections in the United State
with plenty of detail illustration to clarify points covere

Landscape in Wind, a hanging scroll in ink and light colour on paper by Sesson, Private Collection, U.S.A.

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Detail, Haboku Landscape by Bokusai (d. 1492). A hanging scroll, ink on paper, at Sinju-an, Daitoku-ji, Kyoto.

Detail from a sketch of Daruma (an abbreviated Japanese name for the founder of the Zen school of Buddhism) by Shōgun Ashikaga Yoshimochi (1386-1428). Hanging scroll, ink on paper, Collection Nesé.

in the commentaries, or brief monographs. In addition, there are copious examples from collections in Japan.

These texts are factual, and revealing about the paintings depicted, with a good mixture of history and analyses which are not written in the too-frequent stratospheric jargon that mars much writing about art, obscuring rather than clarifying, turning away rather than attracting the reader. An example in a couple of lines by one of the editors, Yoshiaki Shimizu, annotating a work by the sixteenth-century master Sesson Shūkei, *Landscape in Wind*, (page 26), a brilliant work that is nearly all movement:

> *The deep quiet of the lake waters swirling around a sharp outcrop of rock lit by a low-hanging moon becomes even more mysteriously still when contrasted with the robust embankment which seems to hurtle towards it . . . The climactic action of the trees bending away from the quiet lake counters the sweep of rocks towards the water . . .'*

During the earlier period of the great flowering of ink-painting, known as the Muromachi period from the quarter in Kyoto in which the Ashikaga Shōguns established a regime that was to last about two centuries, the influences of Zen Buddhism and of China were both strong, and both were reflected in the paintings. In fact, so acceptable to the Chinese were the Japanese paintings of the period that one of the greatest, Sesshū, described by Hugo Munsterberg* as 'certainly the most outstanding of the artists working in *sumi-e*', was asked to decorate a room in the building of the Hall of Rites in Peking.

What is believed to be the last painting before Sesshū's death in 1506, a detail of which is illustrated, is described in the commentary by the two editors as evidence of his 'injecting robust volume into natural motifs clearly defined in space . . . The *Landscape* includes the characteristic vertical peaks and the distant lake . . . But instead of gently entering the picture at the foreground cottage and drifting into space, the viewer jumps between jutting foreground rocks and is quickly pulled along a zigzag path to the middle ground. Rocks and trees forcefully defined by galvanizing outlines and charged texture strokes assert their clear forms in the clear atmosphere . . .'

This is art criticism for the initiate and the beginner alike.

It is strange to contrast this landscape vibrating 'with the electric energy of diagonal thrusts and counterthrusts' with the ultimate delicacy of Sesson, who was born at about the time of Sesshū's death, in his *Eight Views of Hsiao and Hsiang*. Sesson, described in the book under review as 'the last great Muromachi painter', had assimilated a great deal from the Chinese masters as well as from Sesshū, but as the editors say, 'The two artists' treatment of form in space differs radically. Sesshū mobilizes dense interlocking constructions to propel the viewer in and out of cohesive space. Sesson energizes elastic masses, giving the forms themselves an inner dynamism'.

Again, a contrast: the head of Daruma, as the Indian founder of this school of Buddhism was known in Japan. This is a painting by Ashikaga Yoshimochi. The commentary is as economical as the portrait-sketch: 'A broad brush dipped in pale ink contours the head of the patriarch and continues into the sleeves of the cape. Fewer than ten brush strokes in dark ink define the

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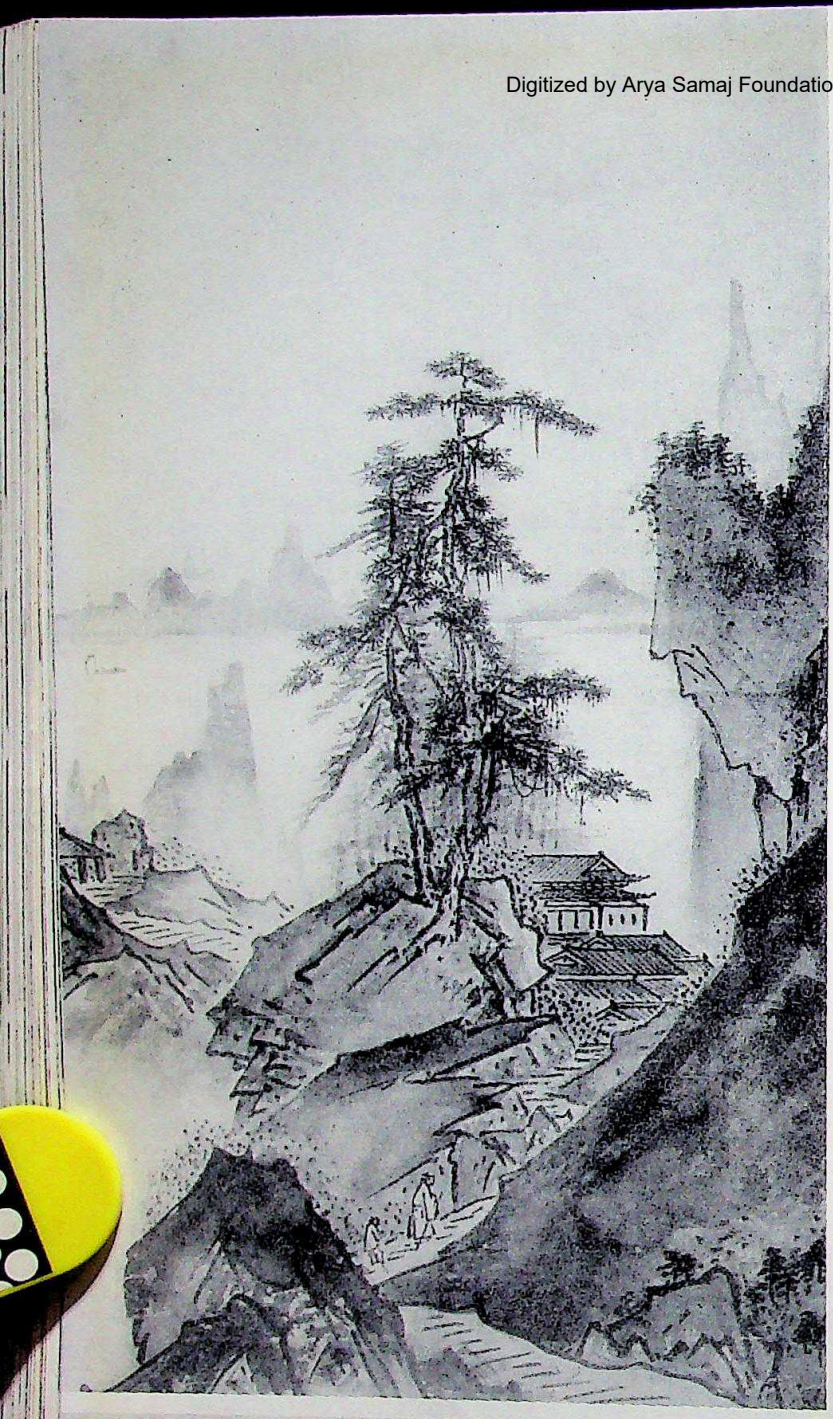

profile of the face . . .' Some more brief lines end
descriptive explanation of this telling portrait.

It was Yoshimochi, the fourth Shōgun, who com
sioned a painting which was to be, according to
Editors of *Japanese Ink-Painting*, 'forerunner of
evocatively idealistic paintings of Shūbun and the soli
constructed, vigorously executed scenes of Sesshū.
artist was Josetsu and the theme set stemmed fro
Zen riddle about trying to catch a catfish with a slipp
gourd, done in about 1413. Its significance lay, as
book's editors say, in several new elements: '. . .
distant mountain which creates a depth of pictorial spa
not seen in fourteenth century painting . . . a new st
is emerging. Foreground terrain, bamboo trees, a runn
stream, the distant mountains rising beyond a vast stre
of space—these are the elements of one of the earli
well-articulated ink landscapes . . .'

Much later was to come a work by Bokusai, who d
in the year that Colombus arrived in America. It is curio
that this work in many ways is very much in the style
the Chinese ink-painters, although in the meantime
Japanese followers of the Chinese had developed a m
indigenous way of working. The work has been done w
a brush made of coarser material than was usual, and
further and convincing rendering of a mountain landsca
in misty rain is gained because of the use of, simp
water on the brush, 'to blur the outlines and cause the
to merge with the massed dots which represent
foliage.'

This book is a valuable work of reference, for its de
and erudition, and it stands as a monument to what t
book's Editors describe as 'one of the most creat
epochs in Sino-Japanese cultural history'.

—DAVID GILCHR

* *The Arts of Japan*, Hugo Munsterberg, Thames and Huds
1957.

*Detail from Landscape by Sesshū (1420-1506). Hanging scr
ink and light colour on paper. Collection of Ohara Ken'ich
Osaka.*

Detail from Catching a Catfish with a Gourd *by Josetsu (filtee
century). A hanging scroll, ink and colours on paper. Taizo-
Myoshin-ji, Kyoto.*

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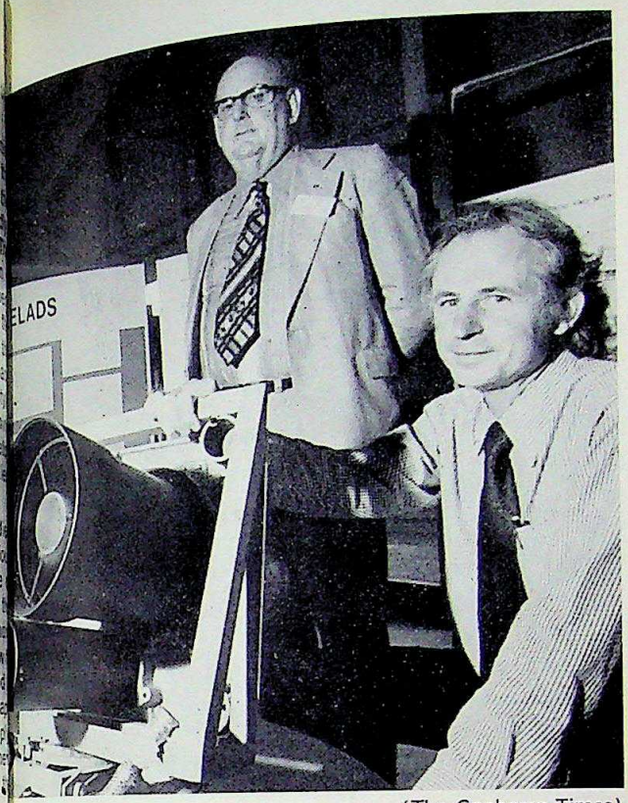

(The Canberra Times)

Mr John Dunne, Head of the Laser Group at the Weapons Research Establishment, with Michael Penny, the research scientist who coordinated the design of the WRELADS Laser Ocean Depth Finder, who is interviewed on the following pages.

LIGHT AND AIR AND WATER

AN AUSTRALIAN first was scored a few weeks ago when the 1st National Laser Conference was held in Canberra. The conference, which brought visitors from various parts of the world, was organised by Dr Len Hughes of the Australian National University.

Dr Hughes, who is Head of the Laser Physics Group at the University, was interviewed on the theme of the conference and introduced Mr Mike Penny, leader of a small development team working at the Department of Defence's Electronics Research Laboratory in Salisbury on the use of lasers for mapping the ocean floor.

Dr Hughes: The application of lasers is extremely wide-ranging, from laser weapons to very delicate operations in eye surgery. The straightness and narrowness of the laser beam means that it can be used to point at any target, military or otherwise. For instance, just outside Canberra lasers are beamed at reflectors on the moon and from these distant measurements we can obtain very useful information. We use lasers extensively for mapping in Australia, which because of its huge area is still inadequately mapped. In a small country like Britain every point is known to within six inches and hence there is no need for laser equipment. But in Australia the situation is different, for according to some maps parts of Queensland are under water! Over the last eight years also the Division of National Mapping have used in Australia a laser airborne system to obtain contour information. So far they have covered 1,750,000 square kilometres and they have had very little trouble with the laser.

This gives you a pretty clear profile of the land; you can even see a single pine tree.

Yes, if you go over a flagpole you can measure its height.

What is the significance to Australia of the underwater mapping that we will be discussing with Mike Penny later on?

Australia has the largest continental shelf of any country. That is an area of three million square kilometres of sea covering a depth range of zero to two hundred metres. A significant area of the shelf is less than forty metres deep which appears to be within the capability of the new Australian laser airborne depth sounder. But a person better suited to discuss this is Mike Penny from the Department of Defence's Electronics Research Laboratory, Salisbury, South Australia.

Mr Penny, What is the real value of this new kind of echo sounder—if you can call it that?

First, let us look at the existing techniques used in Australia and around the world for that matter. The usual method is acoustic: with equipment installed in a surface vessel, to sound the depth of the sea beneath the boat—a modern extension of the old method of using a lead weight at the end of a rope. Since the twenties the acoustic echo sounder has been the basic tool of the hydrographer for collecting data for chart making. The acoustic method is very reliable but surface vessels have two inherent problems: first that the boat travels relatively slowly, and second that the boats can only make depth soundings directly below the vessel and so many sweeps are needed to cover an area. The remote sensing approach using the laser system in an aircraft eliminates these problems. Obviously the speed of the aircraft is much greater than that of a surface vessel and we can establish what we might call a corridor or pattern of depth soundings as the aircraft moves along the coastline. Another advantage is that we can fly over hazardous reef areas where surface vessels might run aground. The economic advantages have yet to be proved but in theory the new method should be very attractive for shallow water applications.

The airborne laser technique needs clean or relatively clean water since the laser beam cannot be propagated through dirty turbid water. This is a disadvantage in some areas but with our huge continental shelf it appears that large regions can be tackled by the airborne depth sounder. Australia has greater need than most

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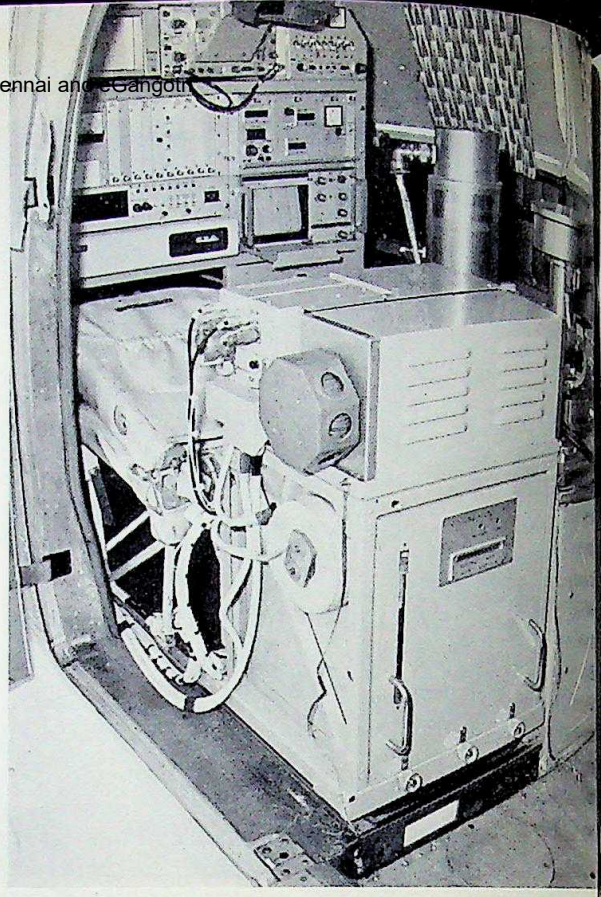
countries for hydrographic surveys because large areas of our continental shelf are mapped inadequately — I stress that word because they are not poorly mapped — and so there is a great deal of work to be done. This work is sponsored by the Royal Australian Navy Hydrographer and is under the control of the Chief Defence Scientist. At the place where I work we have been concerned with the development of lasers for some years. The two large systems that have been built were developed for mapping applications. The first was commenced in 1970 and was accepted by the Division of National Mapping, which has part of the responsibility of mapping in Australia. This airborne equipment provided information which permits stereo models to be levelled. Let me explain: over land the usual way of making a map is to photograph the ground in an overlapping fashion and to assemble a three-dimensional stereo model. But this is useless to the mapper until it is levelled to mean something in terms of a sea level reference. When this has been done a button can be pressed on stereo plotters and contour information can be extracted. It is no good having a model of part of Australia unless we know how it is inclined and so it must be levelled. Now our laser system provides a small cog in the mapping process: we are able to supply the vertical control. Both vertical and horizontal control are needed, horizontal to make sure it is scaled properly and vertical control in order to adjust the tip and tilt of the model. This first laser terrain profiler WREMAPS I is still in current use flying in an Australian Nomad aircraft.

More relevant to our underwater task is the terrain profiler we developed for the Army which also has map making responsibilities in Australia. For this application we built a second generation terrain profiler known as WREMAPS II. This used a different laser and did the job very much better in every way. It needed one tenth of the electrical power for instance. This system went into service with the Army in 1974 and has been used a great deal in Australia, New Guinea and Indonesia. The laser in the Army profiler produces a green beam which is very well suited for penetrating water. This property, which was quite incidental to the Army equipment, gave us a very good start on the underwater task since if a laser beam transmission through water is to be efficient, there is only one wavelength which can be used for a particular type of water. These optimum wavelengths are all in the blue-green spectral region.

The laser airborne depth sounder system is called WRELADS and this is the way it operates: two signal pulses are launched from an aircraft; one, at an infra-red wavelength which is invisible and a frequency-doubled version of that pulse which is green in colour. Both of these very short pulses are transmitted from the aircraft simultaneously and they are generated by the same neodynium laser. The airborne equipment records two events: when the infra-red beam strikes the surface and when the green beam strikes the sea bed. If we can



(Defence Departm

The experimental depth sounder, WRELADS I, in position in aircraft.

measure a time separation between these two eve- then, knowing the velocity of light in water, we can c culate the sea depth. Both pulses strike the surface the sea and the infra-red energy is reflected from surface and is picked up by a receiver in the aircr The green beam penetrates water, with an expone loss with depth. This is where the problems start since attenuation of the light in water is roughly ten thous times greater than it is in the atmosphere and so loss of signal with depth is one of the limiting fac that we face on this project. Another variable rises f the variation in cover on the sea bottom. This may weed, irregular rocks, mud or sand. In general, dif reflection occurs when the green beam strikes the bot and some of this reflecting light travels upward thro the water column and passes through the sea surfa The ripples and waves on the surface play a very imp tant part in refracting light back up into our circ receiver. So we have two signals in the aircraft occurr almost simultaneously; for instance, if the water is metres deep the time interval between the infra-red sig and that of the green laser beam is one tenth of millionth of a second. All systems of this type are gener limited by 'noise', for example, in daylight the sun is reflected from the surface of the bulk water and e the bottom: this produces 'noise' in the receiver. other problem is that the green beam that enters water will give us very big and undesirable reflecti from the surface. What we do in the WRELADS sys is to use a green telescope which tends to obscure

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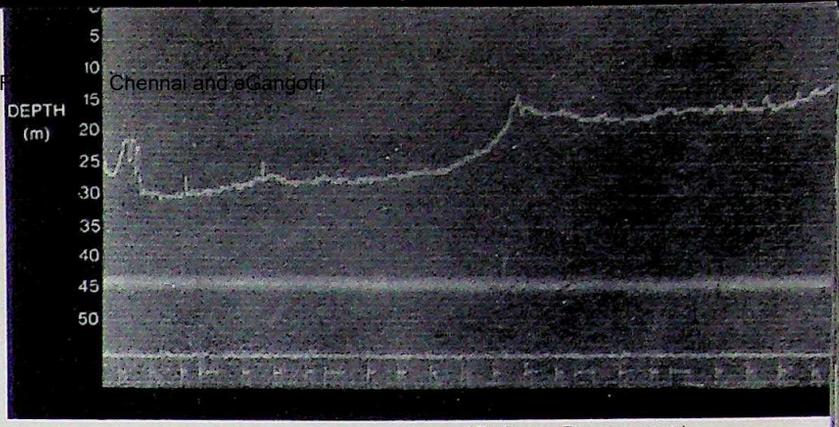
illuminated disc of green energy on the sea surface. In addition, as the green beam enters the water back-scatter is produced — that is the kind of thing you see when you look along a torch beam in a dusty room. Finally there is the signal you are looking for, a reflection from the bottom.

We began this task in October 1975, after some feasibility work. We divided the task into two stages. The first produced what we call WRELADS I which, in a similar fashion to a boat, makes depth soundings immediately beneath it. In this phase of the program we wanted to understand the physics of the problem so that we could properly design the final system WRELADS II which is currently in the course of construction. We have tested WRELADS I during about one hundred and fifty hours of flying over South Australian gulf waters, over the Great Barrier Reef in northern Queensland including the Torres Strait, and finally the Gulf of Carpentaria. We have demonstrated that depths down to thirty metres can be measured and that we can record depths of up to fifty metres, but the fact remains if the water is dirty the system does not work well.

WRELADS II, the equipment currently under development, must record three pieces of information about the depth sounding: the depth, the position where the sounding was made and the time. The last is required for tidal corrections. Since the Hydrographer wants to operate the aircraft over the horizon, a precision radio aid is required. This needs shore stations at fixed points transmitting fixed patterns which the aircraft interprets to establish its position. That is the first requirement. The second is to produce high quality navigation information to tell the pilot where he is. It all happens at very high speed. The aircraft flies at five hundred metres above the sea and will produce twelve depth soundings across the track of the plane every one-seventh of a second. Then it will lay down another line of soundings. The across track cover will be two hundred metres wide, so as you can see precise flying is essential, for having flown over one corridor, we then come back (displaced two hundred metres) on another run. With such new techniques there are all sorts of problems to overcome and new rules must be established as we go along. We will be providing on the aircraft the best possible signal processing to allow the operators to know how well the system is behaving. Back on the ground we will re-process all the material to make sure we are getting the very best results.

The WRELADS system will not replace equipment already in use for depth sounding, but rather complements it because hydrographic survey ships which are presently being used for soundings close to the shore will be freed to move out in deeper water where there will be less danger of running aground, and where they can place their data points further apart. In shallow water the depth soundings must be in close proximity to detect isolated rocks and this appears to be where WRELADS can play a useful role.



(Defence Department)

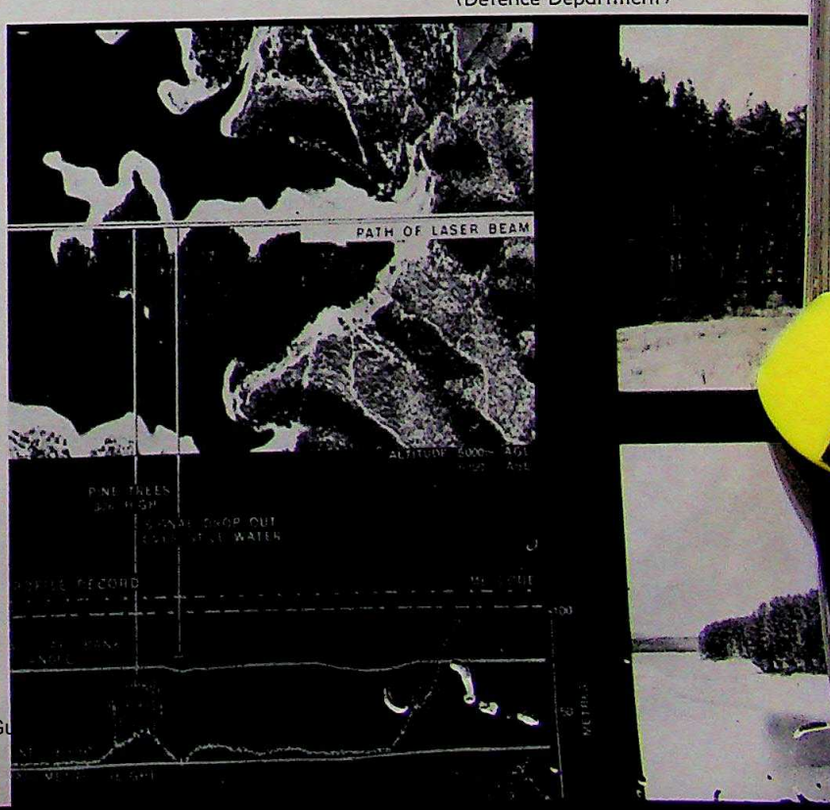
A profile of Ribbon Reef, off the Queensland coast, by WRELADS I.

(Defence Department)

An operator at work with WREMAPS II, the Army Laser Terrain Profiler.

An aerial view and land views of Millbrook Reservoir, South Australia, and its profile, including trees, made by the Army Terrain Profiler.

(Defence Department)



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THE SHWEDAGON PAGODA

Nigel Camero

One of the most famous Buddhist monuments in the world is the great gilded pagoda of Rangoon, capital of Burm The stupa soars far above the skyline of the ancient city, and is more than a place of pilgrimage; it is a place visited a honoured as part of the daily life of the people of Rangoon and of Burmese of other districts who come to pay homa at the many shrines erected in the name of the Enlightened One, leaving gifts and tributes as a measure of their pie

In the following article by Nigel Cameron, one of the best known writers in the English language on matters Asia details of its construction and its imposing measurements are given. Nigel Cameron is the author of many books a is adviser to the famous Weatherhill Press of Tokyo and New York.— Editor.

POSSIBLY the first mention of the Shwedagon Pagoda comes from the Portuguese *fidalgo* (literally, *filho d'algo,* or 'son of a Somebody') Fernão Mendes Pinto when he reached Rangoon from Pegu in 1545. 'The temple of this Idol is a very sumptuous edifice, situated in the midst of a plain upon a little round hill, more than half a league in circuit.' From this rather bald statement, one gets no very exciting picture of what is the largest Buddhist monument of its type in the world. Admittedly at that time the Shwedagon was hardly as big as it is now, but it must have been even then an impressive pile of gilding, worthy of a more enthusiastic description.

Shwe means 'gold' and *dagon* is the Burmese word for 'Rangoon'— but, apart from its gilding and its situation, rather little is known of it until the fourteenth century. It is said that two Burmese brothers presented the living Buddha with honey cakes, and in return the Buddha gave them eight hairs from his head. These, following the old story, were brought to Burma by ship, four of them being appropriated by others en route. The surviving four hairs were placed in a vault, and a golden pagoda was erected on top—to a height of sixty-six feet. As the years passed the monument was raised higher, and in 1372 the King of Pegu visited Rangoon and repaired it. Thereafter, successive kings — Mon and Burmese — added to the pagoda until about five hundred years ago it reached its present height and size.

But by the time the Portuguese Pinto saw it, Queen Shinsawbu of Pegu (1455-1462) had already built the great terrace, surrounding the central stupa, which she had gilded with gold leaf equivalent to her own weight. In fact, during her last illness this pious queen retired to the pagoda, placing her bed so that she could see its great gilded pinnacle. By this time the total height had reached three hundred and two feet. Not until 1774 did King Sinbyushin of Ava raise its height to the pres three hundred and twenty-six feet.

But we have a better description of the Shwedag not very long after the grudging one of the dull *fidal* Pinto. In 1586, an English traveller named Ralph Fit after a series of hair-raising adventures in India, arri in Pegu, from which he visited Rangoon. He wrote:

> 'About two days journey from Pegu there is a . . pagode, which is the pilgrimage of the Pegues; it called Dogonne [Dagon], and is of a wonderful b nesse, and all golded from the foot to the toppe . . It is the fairest place, as I suppose, that is in the wor It standeth very high, and there are foure wayes to which all along are set with trees of fruits, in such wi that a man may goe in the shade above two miles . And when their feast day is, a man can hardly pas by water or by land for the great presse of peop for they come from all places of the kingdome of Pe thither at their feast.'

This is something more like the striking impression t traveller today gets of the great shining spire on top the hill a mile or two from the centre of Rangoon—eith as he may first see it to the south as the plane comes to land at the airport, or later when he walks along straight road northward from the city to the foot of great shrine-encrusted hill. There are still four ways the hill, one from each of the four directions, and th are still four stairways up the steep sides, just as th were long ago. But for the benefit of the infirm for wh the climb of a minimum of a hundred and four steps the southern entry (the east, north, and the west ha more) would be too much, a lift has been installed at t eastern side.

Until this was done, distinguished visitors were genera conducted up the west (and longest) stairway. The corr way to see the pagoda is to make a clockwise tour

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reaching the wide square paved terrace that surrounds the circular base of the central stupa. Oddly enough, the western stairway is unimpressive at its lower end, and as the visitor removes both shoes and socks (such is the sanctity of this place that only bare feet are permitted on its surfaces) there is little enough to see. As the stairs mount straight ahead, they are lined (as are all the others) with many stalls selling offerings which the Buddhist faithful buy on their way up; flowers, both real and ingeniously made of coloured paper and straw, miniature umbrellas of cloth or paper and reeds—replicas of the Buddha's ceremonial umbrella, the sign of his original royal and later divine status—offerings of packets of food, incense sticks, and a dozen other inexpensive but charmingly decorative things. There are of course souvenirs in the form of amulets and charms of innumerable kinds, and for the tourist who is not Buddhist, a selection of teak carvings, lacquerware and finely woven cloth of intricate patterns and pleasing colours.

As you ascend, the air seems to thicken with the heavy, pungent, but sweet smells of incense smoke, and it is with something like awe—perhaps partly enhanced by the dim filtered daylight in the covered stairway—that you emerge at last into the brilliant dazzle of gold, white stucco, and a scattering of flower offerings that surrounds you on all sides. It is somehow miraculous, the transformation from dark to the enlightenment of gold and sun and sky.

At first sight it is all bewildering, a jumble of bigger and smaller buildings, pillars inlaid with coloured mirror mosaic, sculptured images of the Buddha, shrines with dim interiors, people moving in and out of them, walking clockwise on the broad terrace; a mixture of colour and movement and people amid a complexity of sculpture and decoration—and everywhere the glint of gold and more gold.

But soon the scene sorts itself out. You tend to watch the people. There are quiet smiling groups of Burmese in their colourful *lunghis,* the old ladies wearing gauzy white blouses, the children mostly in Western dress rather as if they were going to a party. There are groups of Shan and other tribal peoples from remote areas, the men in battered felt hats, their faces tending to be more lean than those of town Burmese. The families have brought their babies, their elegant sprays of real and paper flowers as offering. Everyone is coming and going quietly on bare feet, and the only sounds are of tinkling bells and subdued chatter. It is the people whose presence focuses the otherwise blurred clutter of architectural elements and decoration.

Piety among Western people tends to be a shade solemn. But at the Shwedagon, and elsewhere in Buddhist lands, there is always an element of natural enjoyment and of comradeship in the worship of the Buddha. In Burma the Buddhist pantheon is supplemented with the ancient (more ancient than Buddhism itself) spirits called *nats.* Little figures of *nats* appear, Puck-like, here and there.

The summit of the hill on which the Shwedagon Pagoda stands has long been levelled to form a platform that is now nine hundred feet from north to south and seven hundred feet from east to west. The open space between the base of the pagoda itself, cluttered with shrines and smaller edifices of various kinds, varies between fifty and two hundred feet wide. The outer perimeter of the platform is lined with *tazaungs*—meaning shelters, but are really chapels housing various statues of the Buddha, mostly in a seated position. The *tazaungs* often have five or seven roofs piled one on top of the other, and some finish in a *hti* (a crown or umbrella-shaped object). The seated Buddhas represent Him in the posture of meditation, while those in which the figure is standing show Him addressing the people after attaining Buddhahood.

The *tazaung* at the top of the west stairway is commonly called the 'two-pice' (two-cent, as we might say) chapel because it was built with small contributions made daily from the bazaar people in a district of the town. Opposite, over the paved terrace and a little left, is the statue of King Okkalapa (Okkala was a former name for Rangoon). Further on, at the northwest corner are eight niches, each with a Buddha, each crowned with an animal or bird representing the sun, moon, and planets: *Galon,* the mythical bird, representing the sun and Sunday, the Tiger for the moon and Monday, the Lion for Mars and Tuesday; and so on, with an elephant, serpent, rat, the tuskless elephant Rahu whose planet causes eclipses, and the mole.

In this same corner is the great bronze bell presented in 1778 by the son of King Sinbyushin and weighing about sixteen tons. During the first Burmese war it was taken away by the British, but the boat on which it was placed in the river keeled over and sank. The bell was recovered by Burmese and set up again in its former place in 1926. Nearby are several trees now growing tall and shady, planted by various visiting and local dignitaries.

A score of pages of a guidebook could be filled with a mere listing of the numerous subsidiary pagodas and *tazaungs* surrounding the great pagoda itself. Many have interesting tales attached, historical and apochryphal. Memories of the great fire that swept through one part of the complex in 1931 are stirred by the newness of the structures that replaced those then destroyed. Memories of the British occupation of the Shwedagon in 1852 are there, too, in the shape of one or two 'tanks' of water, which used to be called the Scotch tank after some of the temporary occupants of the pagoda at that time.

At any time of the day the multiplicity of small and larger *tazaungs* contain worshippers, and a continual stream of Burmese wend their way clockwise round the foot of the great central stupa, pausing at points to make their devotions, to light incense at this or that shrine, to offer flowers and little paper umbrellas, in a scene that

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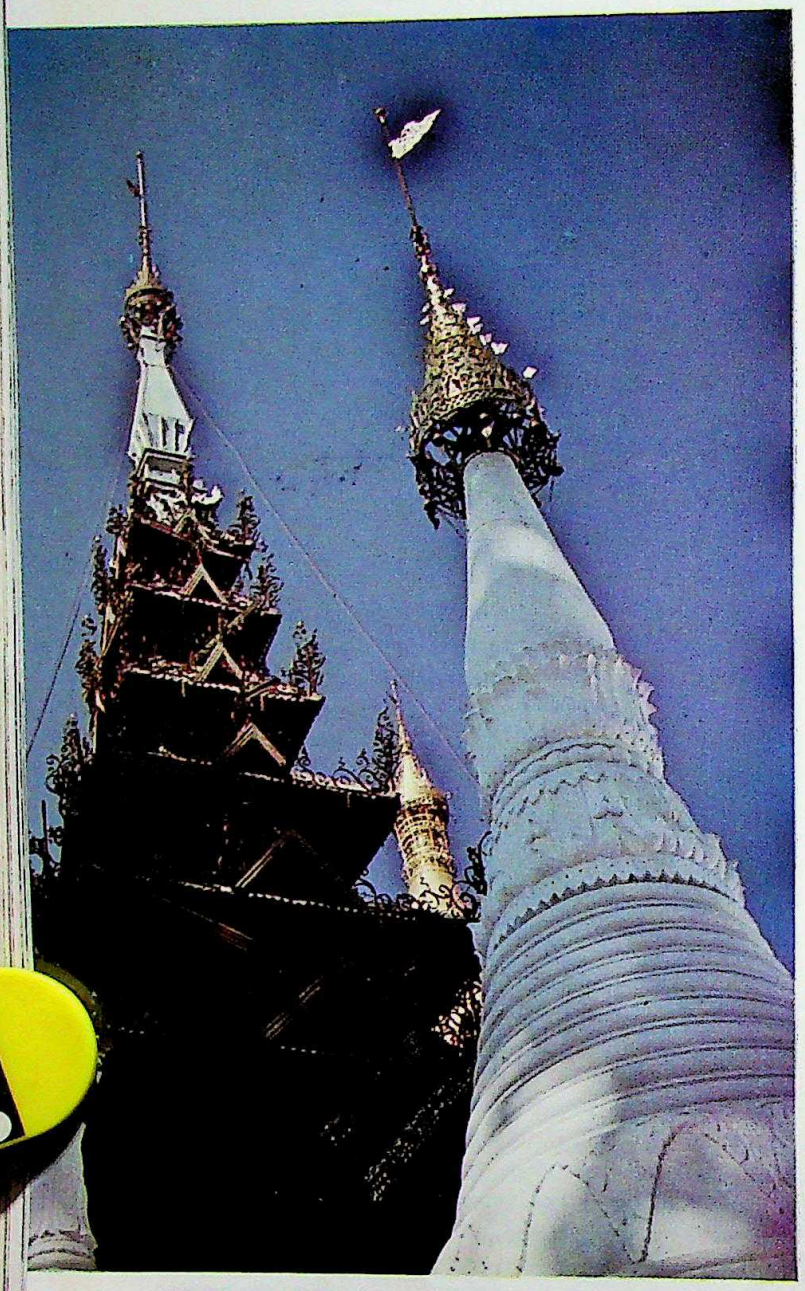

The tops of two differing tanzaungs *with their gilded* hti, *or umbrellas: one, a simple white construction, the other more in pagoda style, with wrought-iron finials; below, the terrace at sunset.*

A family visits the Shwedagon, a famous place of pilgrim for all Burmese.

is animated without being busy, and always full of inter and charm. All come with friends, with family. The v is a happy time for everyone, and for those with so favour to ask, perhaps a time of devout hope for w fulfilment.

Above them all, its gold-plated sides gliding upw to the sky, the great pagoda rises, gleaming in the s Some way up is a terrace to which, with permission, visitor may climb and see the shrine with an ima inside. Above this is the 'bell' of the structure (so ca from its shape), and above again are a series of ripp corrugations until the *thabeik* (an inverted monk's begg bowl) is reached—a place where two open lotuses, o drooping its petals and other raising them, form junction between the lower and the upper parts. Abo this is the *hngetpyawbu* resembling a lotus bud unopene and this is surmounted by an elaborate *hti* which m be the most beautiful in all Burma. The delicately fili multiple umbrella of *hti* is over fourteen feet in diame and thirty-three feet high. It is made of seven wrou iron tiers, gold plated and inlaid with diamonds, rub emeralds, and other precious stones. Above this co the vane, nearly five feet high and tapering to a s flag-like metal object that turns in the wind. And at very top is the *seinbu,* the Diamond Bud. This is an of gold ten inches across and inlaid with diamonds other gems.

The richness of the whole structure is obvious to eye, but the real richness of this deeply revered pag can be counted in material terms in the gold plate covers much of the upper parts to some consider thickness and is gradually being extended down over the bell, and by the thousands of diamonds that the topmost bud, and more than a thousand diamo and even more other precious stones on the vane.

It is sometimes said that the shape of the ty

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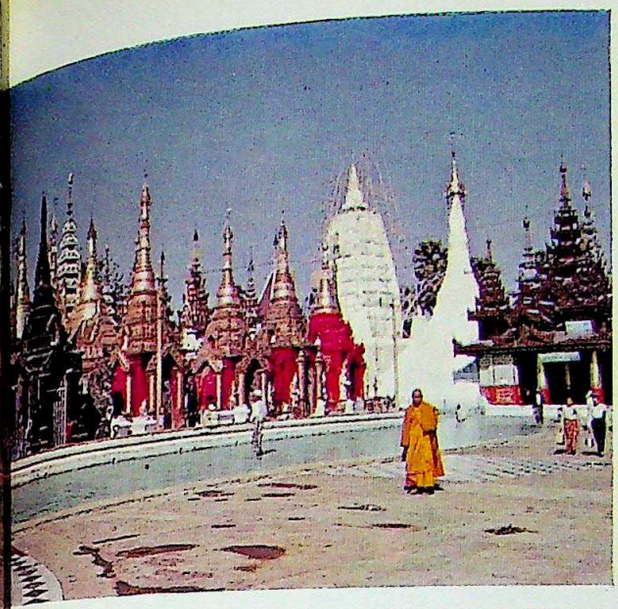

A monk and devotees on the broad terrace at the base of the pagoda.

Buddhist stupa, or chedi (depending on language and country) derives from a basic concept of the beauty of a woman's breast. But perhaps this is as doubtful as the idea that the Western Gothic spire derives from the image of thin praying hands uplifted. Both symbolise the desire of man to reach out toward some state of otherness than himself, toward something or some concept greater than his apparently finite self. There seems no need to elaborate models for the Buddhist stupa. Breast-shaped, more or less, it often is, but perhaps that has minimal significance.

The Shwedagon Pagoda is one of those places where many a later visit is an enjoyable and interesting as the first. Each time you can investigate one or two other statues, examine more closely the patterns of mosaic on pillars, look at various paintings in certain *tazaungs;* or just sit on the warm stone of the terrace shaded by a tree or a building, and take in the peace of the place. Its animation is peaceful, even the glow of gold and the bright colours of offerings or of painted images, the mixture of shapes and forms, blend after a while in the manner of complex structures that have been built somewhat haphazardly over a long time-span.

As the evening comes and the sun descends behind the forest of little spires at the west of the terrace, there is a magical twenty minutes when the sky is lit to incandescence and the space between the outer structures on the platform and the great dull gold uprising of the pagoda turns into a misty bluish canyon in which little candles flicker and some worshippers still meander round in the dusk.

Down the southern stairway, now lit by candles, lie two huge white leogryphs, or formalised lions, one on either hand at the base, beasts that in Burma are called *chinthe.* The Burmese say they are bidding you farewell as you go off down the quiet evening road toward Rangoon.

Above, an image of the Buddha is cleaned, and below, women at their devotions; beyond them, the intricate carving of the screens of one of the large pavilions. (Photos by the author.)

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MORE THAN FIVE M's

The Tantric Way. Art, Science, Ritual by Ajit Mookerji and Madhu Khanna; Thames and Hudson, 208 pages. 1SBN 0 500 27088 0.

TO ANYONE unfamiliar with some of the mutations cropping up in the evolution of Indian religious life, there is something a little surrealistic about textual prescriptions such as this: 'With liquors, meats, fish, aphrodisiacs *(mudrā)* and copulation with women, the great holy man *(sādhu)* should worship the Mother of the Universe.' Sometimes, orthodox Hindus and sympathetic foreigners alike have been tempted to deny the reality of what is implied. Others have acknowledged that such practices exist, that the prescriptions are intended for real life and are not always (as is, indeed, sometimes the case) symbols to concentrate the mind of the innocently meditating devotee, and have treated the stream of religious life which they represent as if it were a bad smell.

The practices are real enough. They belong to a current in Indian religion which has been an active and clearly formulated tradition since the latter part of the first millennium A.D. (not as long as this book leaves the reader to believe). This stream is tantra. The five instruments of ritual mentioned in the passage quoted, adopted in part quite deliberately to invert the values of mainstream Indian orthodoxy in which, of course, vegetarianism and temperance are modes of ritual purity, are a part, though not the core, of tantra. They are known as the five Ms because M is the initial of each of the five Sanskrit words. Sometimes the five Ms are imaginary, aids to meditation. Sometimes they are represented by vegetable substitutes and harmless ritual objects. Sometimes — in the uncompromisingly heterodox 'left-handed' path — they are part of a ritual designed to dissolve the adept's mind into the ultimate, a ritual that culminates in *maithuna,* the last of the Ms.

What is tantra? It is much more than the five Ms. It is not exactly a religious denomination or sub-sect on its own; rather, it is a persuasion that has been influential both in Hinduism and in Buddhism, especially in the sub-Himalayan northern regions. It is strong in both religions, and should not be thought of as an ingredient in one which spilled over incidentally into the other. Ajit Mookerjee and Madhu Khanna assert that its 'broad base' is in Indo-Aryan culture, and claim tantric elements in the ancient Aryan Vedic religion; but in fact tantra, like yoga, with which it is closely associated, appears to owe its essential inspiration to archaic religio-mystic sensibilities that were native to the northern slopes long before the Aryans arrived and remained to give a distinctive tincture to the later development of Indian life and ritual.

Tantra is not a highly codified body of independent doctrine either. It has its scriptures, but by and large it bases itself philosophically upon the teachings of the respective Buddhist or Hindu schools where it apperas. It is essentially a practical method whereby the believer who wishes to obtain salvation by a short path may employ special rituals and meditative techniques to lose his experienced (and, in metaphysical terms, illusory) self, ātmā, in the ultimate reality. If he is a Hindu, he may describe this reality with the language supplied by monist Vedānta (everything is an aspect of the primal, indivisible One), or dualist Samkhya-yoga philosophy (the phenomenal world is produced by the interaction between the inert primal animating principle and ... active power principle), or a mixture of the two. If ... is a Buddhist, he will use the language of *sūnya,* ... emphasises not only the unreality of self but also ... unreality of any conceivable alternative reality, ... because it is conceivable.

Tantra deserves to be taken seriously. In ta... meditation, one conjures up in the mind meticulo... detailed arrays of deities and symbols, works on ... rich inconographic details, which should be as fam... as a friend's face or the road home, until the me... picture has become a vivid presence, and holds the sce... fast so that it becomes as real as is the physical wo... to ordinary sight, and the mind's eye can light on ... detail or that. At this point the chosen deity pictured ... the centre of the array may deign to enter the me... picture, to become the picture itself, or even to beco... the mediator himself, who then is considered to acq... supernormal powers and to be launched towards ... mystic goal.

What is important about this is that the techniq... involved need to be assiduously cultivated over a lo... period and lead to experiences which are very import... to the devotees and which cannot simply be written ... All the paraphernalia of tantra — mandalas (pictor... inconographic circular arrays, mentally pictured or dra... on the wall or floor), yantras (diagrammatic emblem... mantras (mystic formulae, repeated sometimes hundre... or thousands of times), and all the rest — are not pri... tive magic but a carefully designed symbolic langua... with which the adept seeks to communicate with rea... as he conceives it.

Such a subject can easily be ill-served by a distanc... academic approach; it can be even worse served ... the woolly-mindedness characteristic of many propone... of mystic traditions. Any account of tantra in a mode... language that seeks to make it intelligible has a narro... path to follow. That *The Tantric Way,* Thames an... Hudson's richly illustrated and attractively designed ne... book, fails to achieve the ideal fusion of insight, accura... and objectivity is not a true indictment. Nevertheless, ... must be said that its many vague claims and occasiona... naive assertions detract from its authority. In particul... the authors have let themselves be led astray by ... desire to give tantra scientific legitimacy.

> The Kundalinī Sakti [coiled serpent at the base ... the spine embodying cosmic energy] can be arous... through various meditative techniques and process... . . . Rhythmical breathing makes all the molecules ... the body move in the same direction in order to ga... control of the mind. If the air in our lungs at a... moment contains 10,000,000,000,000,000,000 ato... we can imagine what current is generated by ... movement of all the molecules in the system, bring... the restless mind to single-pointedness.

Unfortunately, there is quite a lot of this sort of thi... in the book.

The title should, strictly, be 'Sankhya, Yoga and Hin... Tantra', for a great part of the content concerns Hin... traditions that form the background to tantra but are ... properly part of it, while tantric Buddhism is bri... mentioned early and thereafter ignored. Still, the auth... are genuinely concerned to give, from within (... Mookerjee has long been a student and practitioner ... tantra), a fair and informed account of tantra and ... relate what many see as its oddities to a philosophi... scheme. That, after all, is what the subject deserves.

—IAN MABBE

Dr Ian Mabbett is a Senior Lecturer in the History Depa... ment of Monash University, Melbourne.

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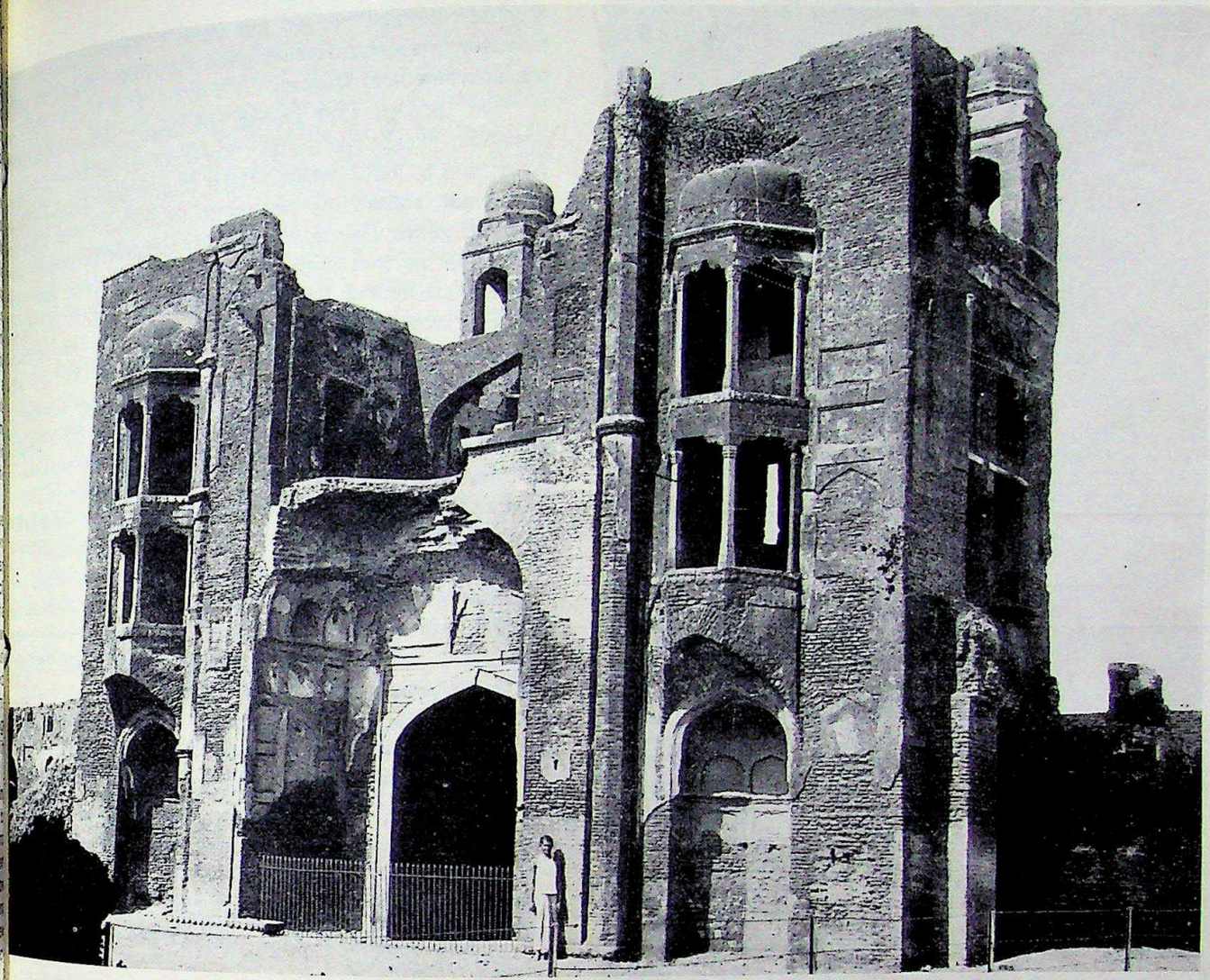

The south-east gateway of Lalbagh Fort, seen from outside.

KINGS NO MORE

Nazimuddin Ahmed

THE SPLENDOURS of mediaeval Dacca, now reduced to a few Mughal monuments with weathered domes and turrets, towers and fortifications, reflect as deep shadows in the pensive waters of the Ganges (Buriganga). The old city spreads along the northern bank of the historic river, contrasting with the new city that extends away to the south and east.

The capital of Bangladesh is near the centre of an immense flat land drained by some of the world's mightiest rivers — principally the Ganges and the Brahmaputra with their numerous tributaries. Around the city are lush green fields as far as the eye can see. Not surprisingly, ancient chroniclers called it 'a land of emerald and silver' and 'a garden fit for kings'; Mughal official documents styled it as *Jannat-ul-bilad,* the Paradise of Countries.

From the obscure position of a military outpost in the most easterly, and most turbulent province of the far-flung empire of the great Mughals, Dacca (correctly Dhaka), rapidly rose to eminence as the 'Queen of Cities in the East' early in the seventeenth century. Islam Khan Chisti, a stern and exceptionally gifted Mughal Governor of Bengal, transferred the capital of the province from Rajmahal to Dacca in 1608 A.D. He re-named it Jahangirnagar in honour of his patron, the Emperor Jahangir.

Rebellious elements were active in eastern Bengal at the time. Afghan chieftains and recalcitrant local *Zamindars* (land-owners), popularly known as *Bara-Bhuiyas*, constantly raided the Mughal territory. Mugh and Portuguese pirates, who infested the lower waters of the delta, repeatedly sallied forth from Chittagong; they swarmed up the rivers like locusts to plunder and burn villages and towns, leaving behind desolation and ruin. Islam Khan, during five stormy years in office, effectively consolidated

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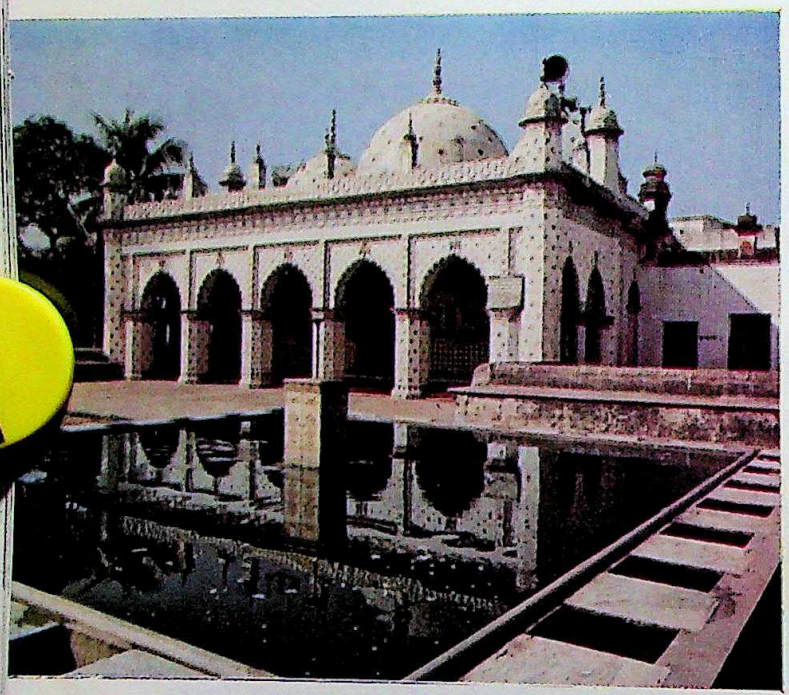
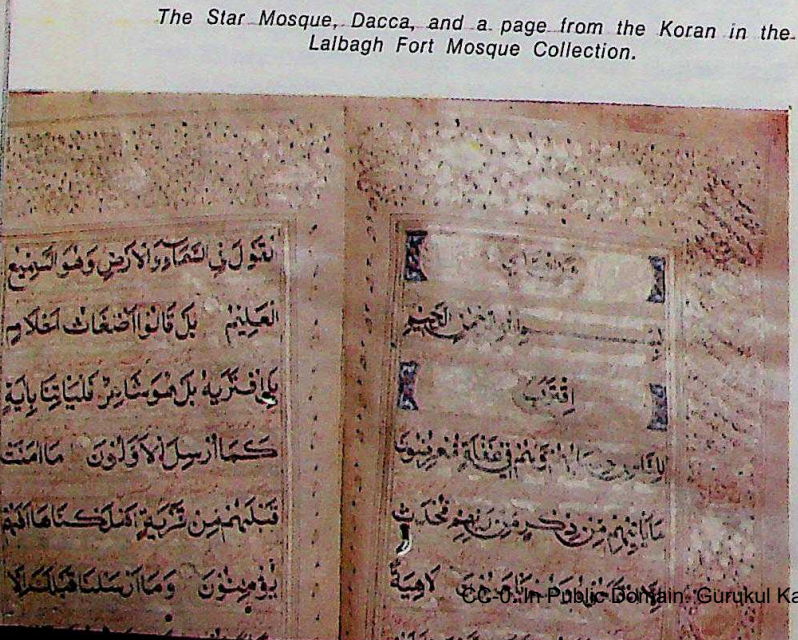
Satgambud Mosque at sunset.



The Star Mosque, Dacca, and a page from the Koran in the Lalbagh Fort Mosque Collection.



Mughal rule and earned the epithet 'Pacifier of Ben... however, his governorship gave him little respite to ... the adornment of Dacca.

From 1608 to 1717 Dacca remained the capital of ... province, except for a short break of about twenty ye... from 1639 to 1659, when Prince Shuja, then the Gove... of Bengal, shifted the capital to Rajmahal. For abo... hundred years, Dacca attained its greatest prosperity ... expansion so that it monopolised the overland and ... borne trade of the East. The prosperity lasted till 17... when Prince Azimus-Shan left Dacca; the capital ... officially removed to Murshidabad in 1717.

In the hundred years of their vigorous rule, succes... Mughal Governors and princely viceroys — for exam... Jumla, Shaista Khan, Prince Azam, and Ibrahim Kha... adorned the province with many imposing pala... mosques, mausolea, fortifications and other build... often surrounded by beautiful gardens. But soon after ... transfer of the capital to Murshidabad, desolation and ... overtook the proud city named after Jahangir. The rava... of time and vandalism combined to obliterate many mo... monuments of the Mughals. Even in 1824, when Bish... Heber visited Dacca, he pensively observed;

> Two-thirds of the vast area of Dacca are filled w... ruins, some quite desolate and overgrown with jun... others yet occupied by Mussalman Chieftains the d... cendants of the followers of Shah Jahangir and all ... 'Lions of war, Prudent and Valiant Lords, Pillars of ... Council, Sword of Battle' and whatever other names ... Khan, Amir, or Umra the court of Delhi dispensed in ... time of its greatness. Of the 3,000,000 inhabitants w... roost like bats in these old buildings, or rear their f... and their desolate gardens, three-fourths are still Mus... man.

Among the few ambitious architectural monuments ... the period surviving in Dacca today, Fort Aurangz... commonly known as Lalbagh Fort, is undoubtedly one ... the finest. It occupies the south-western part of the ... city, overlooking the Buriganga. Rectangular in pla... has graceful, lofty gateways on the south-east and no... east corners and a subsidiary gateway on the no... Within its fortified perimeter are a number of sple... buildings symmetrically dotted about the open lawn, r... resenting the finest regional Mughal architecture develo... in Bengal. These are a small, three-domed mosque, ... mausoleum of Bibi Pari, the daughter of Nawab Sha... Khan, and the *Hammam* and Audience Hall of the G... ernor. The main purpose of this fort, it seems, was ... provide a defensive enclosure for the palatial edifices ... the interior; it was a palace-fortress rather than a s... fort.

Construction work on this palace-fortress was beg... 1678 by Prince Muhammad Azam, the third son ... Emperor Aurangazeb; he could not complete it on ... magnificient scale of the original design because he ... suddenly recalled by his father to join the war aga... the Marhattas in the south.

His successor, the high-born Amir-ul-Umara Na... Shaista Khan, nephew of the illustrious Empress Nur Ja...

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and brother of the 'Lady of the Taj', was the greatest of the eastern viceroys and ruled the province for about a quarter of a century. Although he continued construction work on the fort for some time, he gave it up eventually, it is said, because of the sudden death of his favourite daughter, Iran-Dukht, better known as Bibi Pari (Lady Fairy), who was betrothed to Prince Azam.

The monuments inside the fort confirm that its construction work was abruptly abandoned. However, from the accounts of Sir William Hedges, it is clear that Nawab Shaista Khan was residing in the palace-fortress when Sir William visited Dacca.

The defence wall on the south and part of west, about six hundred and nine metres long, survives to a height of about six metres. On the southern side five octagonal bastions project beyond the alignment of the outer wall; the bastion next to the south-eastern gateway is of exceptional size and carries a gun platfom. Externally, the bastions and the wall are relieved with ornamental blind merlons at the rampart level. Close to the south-western octagonal corner tower the remains of an incomplete gate are visible.

By far the most magnificient architectural remains are the two lofty gateways on the north-east and south-east, facing each other at a distance of about two hundred and forty metres. Though somewhat similar to the other in construction, the southern gate is the more elaborate and imposing. It rises in three storeys in stages and is flanked on either side by a vestibule and a stair-room built from inside. Top storeys are incomplete, but the fronton below opens into a graceful archway framed in stone-work. The façade is relieved on either side of the expansive arched opening by a plastered semi-octagonal alcove below with an oriel window in two stages above, crowned by a cupola. The top of the gateway was crowned by four pillared kiosks, breaking the skyline; two of them survive. The central passage is spanned with a domed ceiling, with a fretted design.

Towards the eastern sector of the fort, half way between the two gateways, is a square tank, originally provided with masonry retaining walls on all sides. Traces of a stairway on the south are still visible. On its western bank is a graceful two-storeyed building with an annexe. This is the residence, Audience Hall and *Hammam* of Nawab Shaista Khan. The ground floor of this elegant building consists of a spacious central hall, flanked on either side by a square apartment. The hall has three arched entrances on the east, and is provided with an ornamental rectangular tank in the middle with fountains. On the thick western wall an arched entrance opening, under a half-dome, gives access to the main *Hammam* chamber. Originally provided with a raised platform in the centre, it is tastefully decorated with glazed tiles of variegated colours. Adjacent to it, on the north, there is a small reservoir with inlet and outlet copper pipes for the regulation of water supply. Surrounding the central *Hammam* chamber, there are other apartments on the

Lalbagh Fort and residential buildings at Shere Bangla Nagar, Dacca.

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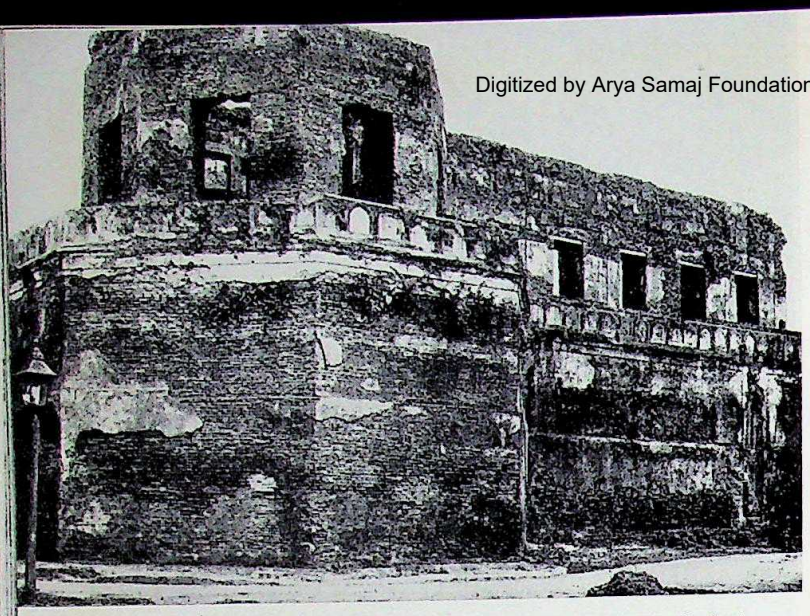
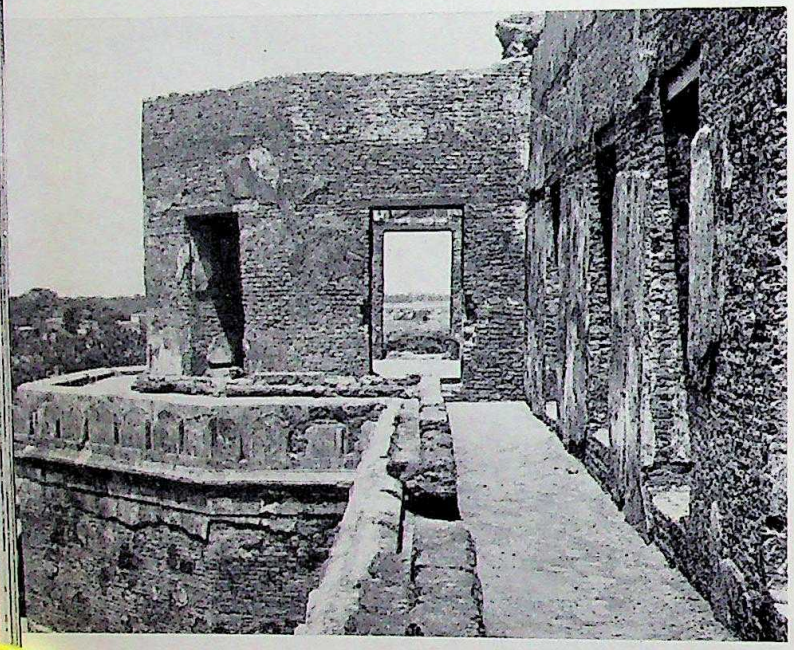


Two views of the south-west corner of Lalbagh Fort.



north, west, and east. A complicated set of earthenware pipes, embedded in the walls of these chambers, was contrived to supply hot and cold waters to the *Hammam*. The floors of all the apartments were covered with encaustic tiles and provided with ingenious covered drains; waste water was discharged from these into an elaborate vaulted masonry drain on the west. All the chambers of the *Hammam* are roofed over with a squat dome; an aperture at its centre might, originally, have been fitted with glass for the entry of light.

The upper floor of the building is reduced in size because of the absence of covered space above the two staircases on either side; it consists of a central hall with a square chamber at either end. The east and west walls of the central hall have four ornamental sandstone columns each. Three multi-cusped arched openings on the east wall, between the columns, were originally provided with stone *jalis*. The hall is spanned by a graceful curvilinear roof resembling a thatched *dochala* hut of rural Bengal. It represents a happy blend of indigenous elements with the Imperial Mughal style common in Delhi and Lahore during the same period. The building has been faithfully restored to its original condition, as far as possible, and converted into a museum.

Bibi Pari was, as has already been mentioned, the favourite daughter of Nawab Shaista Khan and was betrothed of Prince Mohammad Azam. When she died in 1684, her father imported building materials from North India, including black basalt from Rajmahal, sandstone from Chunar, and white marble from Jaipur, to erect a magnificient tomb. The mausoleum occupies the centre of the fort and, although its architecture may not be considered brilliant, it certainly ranks as a unique monument in Bengal. It is the only one where white marble, black basalt and glazed tiles have been used to embellish the interior, and its curious roof construction has no parallel. It stands in the middle of a raised square platform, flagged with black basalt, and has four octagonal corner turrets. The façade projects slightly in a rectangular frame bordered by slender fluted minarets. Of the three openings on each side, the central one is an arched entrance under a half dome; the flanking ones are simple flat-arched openings under half-domes, closed by marble *jalis*. The entire outer wall and the corner towers are relieved with plaster panels.

The roof of the tomb chamber is covered by a fine dome resting on a squat octagonal drum. The bulbous copper dome, which was regularly polished for brilliance, is crowned with lotus finials, once gilded. Internally, the tomb is symmetrically divided into nine parts: a square central chamber, four corner rooms and four rectangular covered passages. Of the four doorways to the tomb chamber, three are closed with arched white marble *jalis*; the fourth, on the south, has a carved sandalwood door leaf.

The walls of the tomb-chamber are encased in white marble with panelling in black lines, and the same scheme of ornamentation is repeated on the floor with a similar pattern. The white marble cenotaph, set in the centre, is formed of three steps, each relieved with simple but chaste floral designs cut in low relief. The device used to support the roofs of all nine chambers of the mausoleum is the Hindu cerbelling system. Huge black basalt slabs overlap one another from the sides and meet at the apex, thus forming a pyramidal roof. This way of spanning a space was practised in pre-Muslim days before the true arch was used, is more ornamental than functional. Why it was adopted here, at the peak of Mughal architectural achievement, is a matter of keen controversy. The passage roofs, though covered with the same type of corbelled stone, have a dado faced with white marble panelled within black lines. The walls of the four corner rooms were originally embellished with glazed tiles of dark-blue, orange, green and purple on a yellow ground; at the time of General Alexander Cunningham's visit, they were still there. Now, however, they have disappeared and been replaced by whitewash.

The mausoleum was planned, no doubt, on the pa

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of the Taj Mahal and the tomb of Emperor Humayun, but in spite of the lavish expenditure incurred on its erection and adornment it lacks their grace and beauty.

West of the tomb there is a small, graceful mosque which, according to tradition, was built by Prince Azam in 1679. Its architectural style confirms the tradition. This oblong, three-domed mosque, stands at the back of an elevated platform. It has four octagonal corner minarets crowned with plastered kiosks, and the eastern wall is pierced with three arched openings of which the central one is framed within a rectangular fronton and flanked by minarets. All the openings are set below multi-cusped arches with net-pattern half-domes. The outer walls are profusely decorated with plaster panelling, and the cornice is relieved with battlemented crestings. Of the three cup-shaped domes, the central one is sprung from octagonal drums; the flanking domes are slightly bulbous and beautifully fluted.

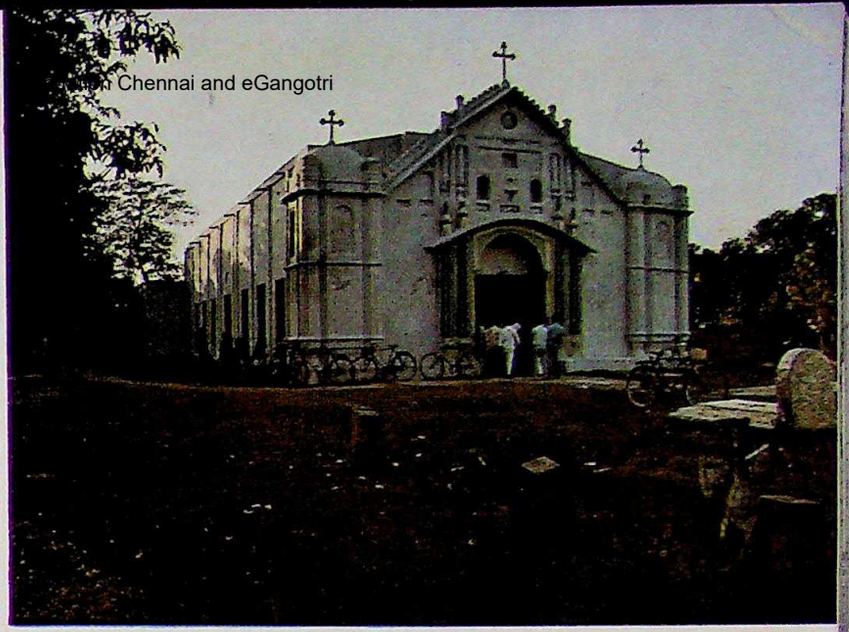
As was mentioned earlier, only twenty years after Nawab Shaista Khan's departure from Dacca and the transfer of the capital to Murshidabad, the importance of Dacca steadily shrank. From the diary of William Hedges, Director of the East India Company, we learn that the Lalbagh Palace Fort was used as barracks and a prison. In 1765 the company secured the *dewani* of Bengal, Bihar and Orissa and forced the Naib Nazim of Dacca, Nawab Jesarat Khan, to leave the fort. Although Nawab Shaista Khan had bequeathed Lalbagh Fort to his descendants, they were too pauperized to pay for its maintenance; as a result it rapidly fell into desolation and ruin. Bishop Heber, in 1824, found it enveloped in jungle.

The fort witnessed a tragic drama in 1857. The great uprising in India against the British, commonly known as the 'Sepoy Mutiny', had stormy repercussions in Bengal. From a detailed account in the diary of Mr. Brennand, then the Principal of Dacca College, we obtain a picture of what happened when British marine forces arrived to disarm a detachment of Indian soldiers of the 73rd Infantry stationed at the fort. The British found the sepoys drawn up and prepared for resistance, and when they tried to force a passage through the broken wall near the south-eastern gateway a sharp encounter took place. There were killings and subsequent hangings.

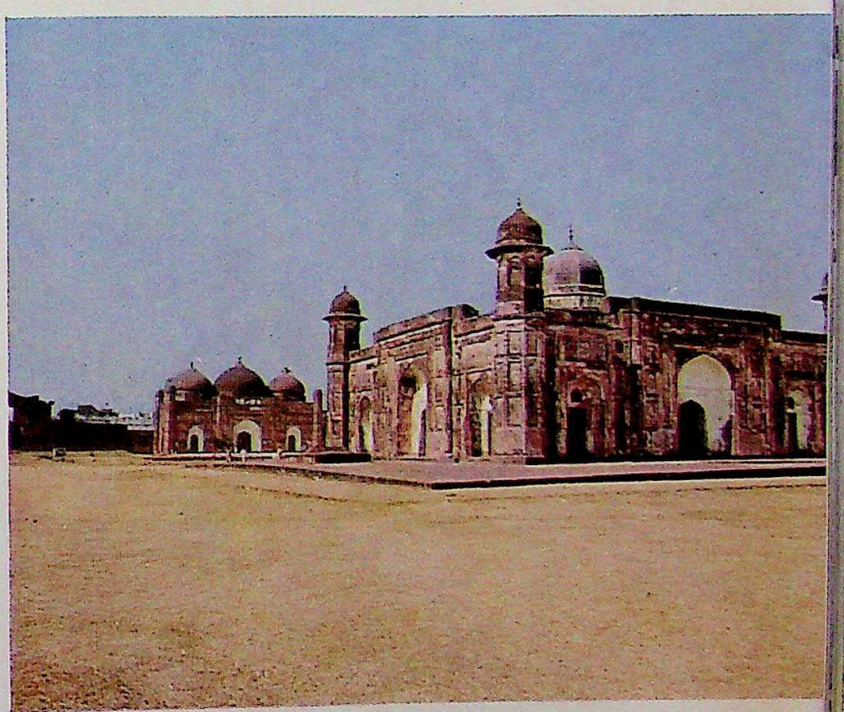
In 1844 the local English administrators had obtained a permanent lease of the fort at an annual rent of only sixty rupees. They converted it into the police headquarters of Dacca and constructed shabby temporary barracks indiscriminately. The open space served as a parade ground.

Fortunately, the fort was eventually protected by the Government in 1910. All accretions were removed, and the original features of the fort were restored. Though the splendour of this magnificient palace-fortress has disappeared with the passage of time, it remains picturesque and still attracts many visitors

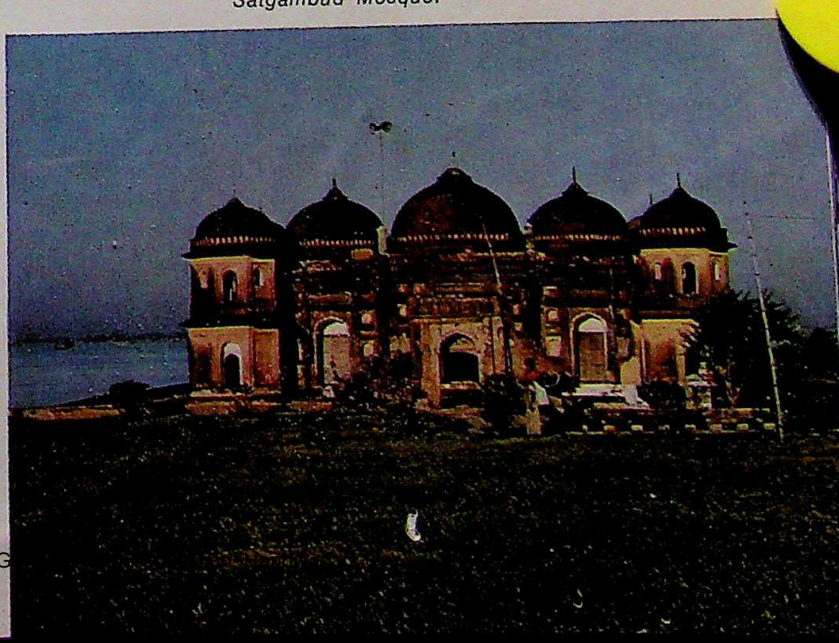
THE AUTHOR: *Dr Nazimuddin Ahmed is Director of Archaeology in Bangladesh.*



The Portuguese Church in Dacca and Bibi Pari's tomb in Lalbagh Fort.



Satgambud Mosque.



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HEMISPHERE

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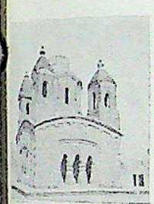
An illustration by Stanley Jangala Gallacher tells the story of a dance carried out by Aborigines after an early struggle with white settlers. Reproduced by courtesy of the painter and Rigby Ltd., from *The Aboriginal Children's History of Australia.* (See review on p. 40).



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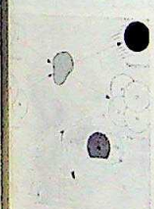

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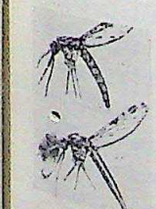

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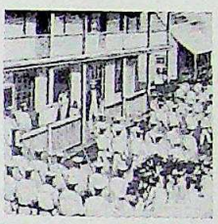

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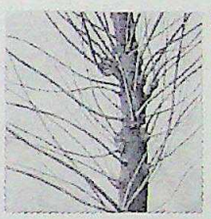

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Hemisphere notes with deep regret the death of Sir Robert Menzies, for many years Prime Minister of Australia. With the late Lord Casey, he was co-founder of this magazine more than twenty years ago and took a continuing interest in the publication.

OPPOSITE: *A mother and child in a Delhi bazaar, as seen by Australian photographer Wes Stacey.*

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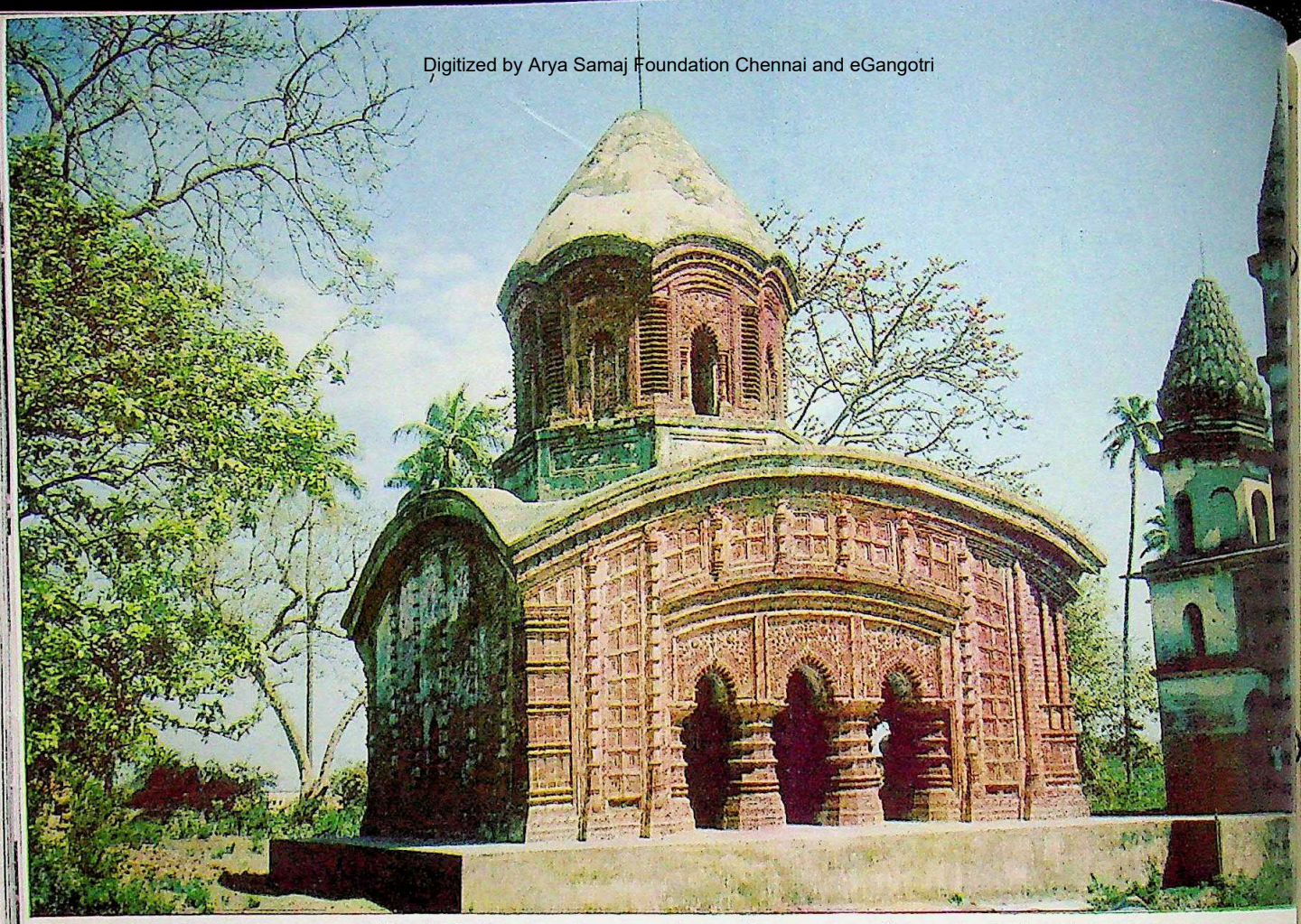
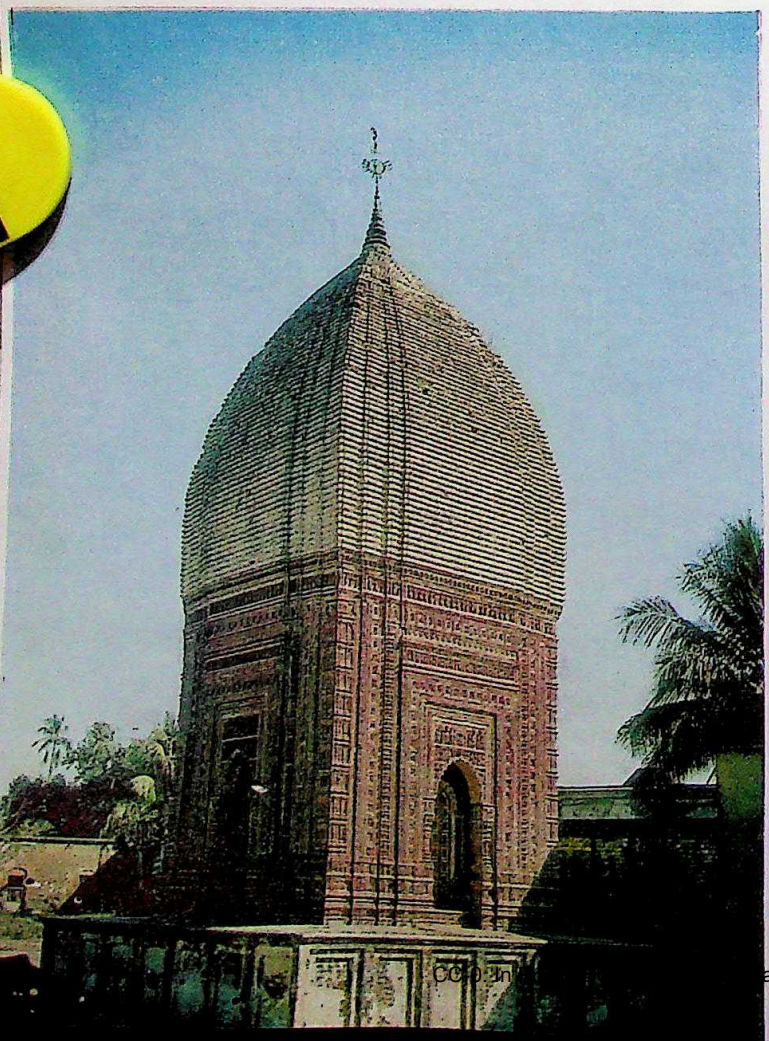


Bansberia, Vasudeva Temple and a smaller temple at Kaina, the Pratapeshvara.



SCULPTURE IN BRICK

George Mich

OF THE many travellers passing through Calcutta, bother to venture beyond the city limits to explore Bengali countryside; thus the brick temples found almost every Bengali village still remain largely unkno Varied in appearance, style and form, these temples unified by their use of a common material, brick, which their massive walls and spires are construc Moulded and carved bricks, sometimes replaced carved stucco, are also employed to achieve the pro overall surface decoration which characterises th temples. Neglected by devotees and visitors, many dreds of temples are now disintegrating, their brick fa unable to withstand the continual onslaught of monsoo rain.

An Englishman, David McCutchion, for over fif years until his untimely death at the early age of fo two, meticulously documented these buildings, inscriptions and sculptures. Thanks to his research

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Bengali brick temples are now beginning to be better known outside India; it is to be hoped that his valuable writings and superb photographs, some of which are reproduced here, will soon be published in a definitive volume, useful to both travellers and scholars.

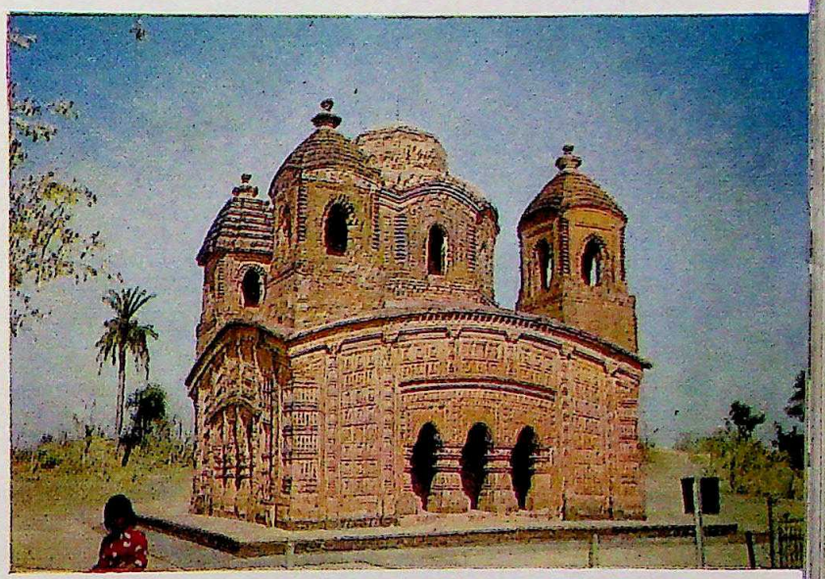
It was only in the sixteenth and seventeenth centuries that Hinduism in Bengal began to emerge after many centuries of Muslim domination in the region. The 'Puranic Renaissance', as it is known, gave a new impetus to temple building and to the depiction of sacred myths and legends. Drawing on a wide range of Hindu and Muslim styles, Bengali architects evolved their own unique brick temples different from those in other parts of India. Remarkable for their contrasting roof schemes and exuberant ornamentation, the temples testify to the vitality of craft traditions in Bengal at a time when they were dying out in other areas.

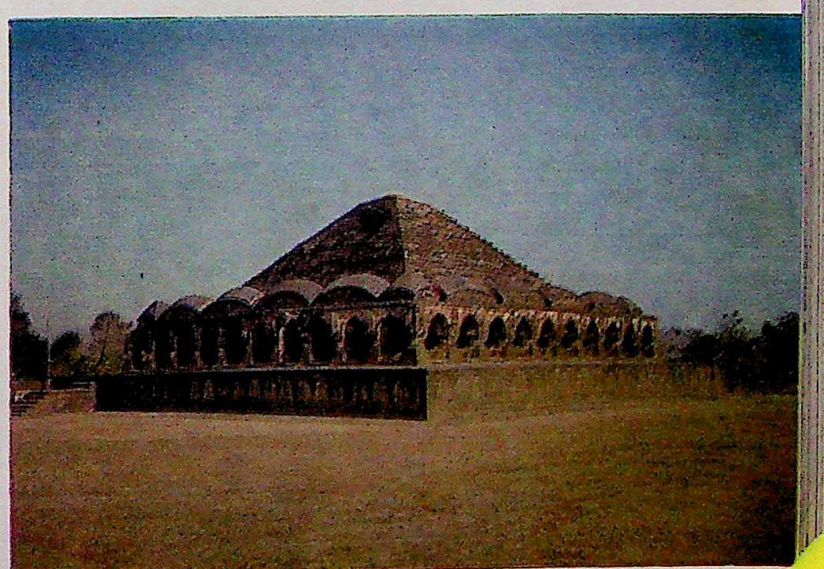
The chief characteristic of the sub-tropical domestic architecture of Bengal is seen in the preference for curved thatch roofs, supported on flexible timbers and bamboo, by which heavy monsoonal rains could easily be shed. When coming to build their temples, Bengali architects carried over these curved and ridged roof forms into the medium of brick and plaster, reproducing in more durable materials what had been essentially a thatch and timber technique. However, these architects were also familiar with the curved soaring spires typical of northern Indian temples as well as the lobed arches, porticoes and dome-like forms utilised in contemporary Mughal palaces and tombs. Employing these various building elements, Bengali architects developed a number of different temple types, improvising with their roof shapes and decorative motifs. In fact, no other regional architecture of Indian Asia displays such a variety of designs—square, rectangular and octagonal; single- and multi-spired; one-, two- and three-storied; porticoed on one or more sides; open and closed plan—many categories of which appear to have been erected at the same time.

An example of the more traditional northern Indian temple in its Bengali transformation is the nineteenth-century Pratapeshvara temple at Kalna. Its small square chamber houses an image of the deity above which rises the curved superstructure delicately articulated by horizontal mouldings. Around the four doorways, real on one side and false on the others, are rows of decorative motifs such as lotus flowers, attendant figures, birds and animals, all executed in stucco. More typical of the Bengali style are the two small Shiva temples at Kalna, built on a bank overlooking one of the tributaries of the Ganges. These temples have sloping roofs with an upper story rising out of a lower one. The inner cell, in which a symbol or lingam of the god is housed, is entered through a triple-arched portico. The roof is covered with plaster but the outer walls and columns are richly encrusted with terra-cotta decoration.

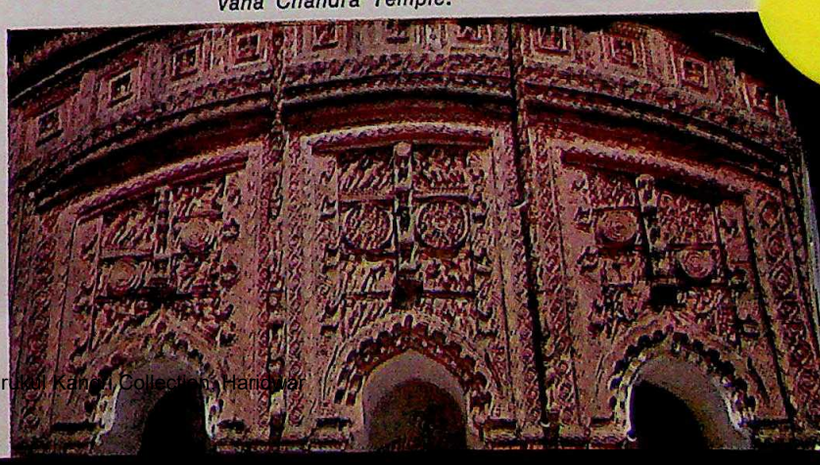
One of the most common Bengali architectural forms is the rectangular village hut with a curved gable-like roof.

A detail of the Shyama Raya Temple at Bishnupur, shown below.





Above, Bishnupur, Rasamancha Temple; below, Ghatal, Vrindavana Chandra Temple.



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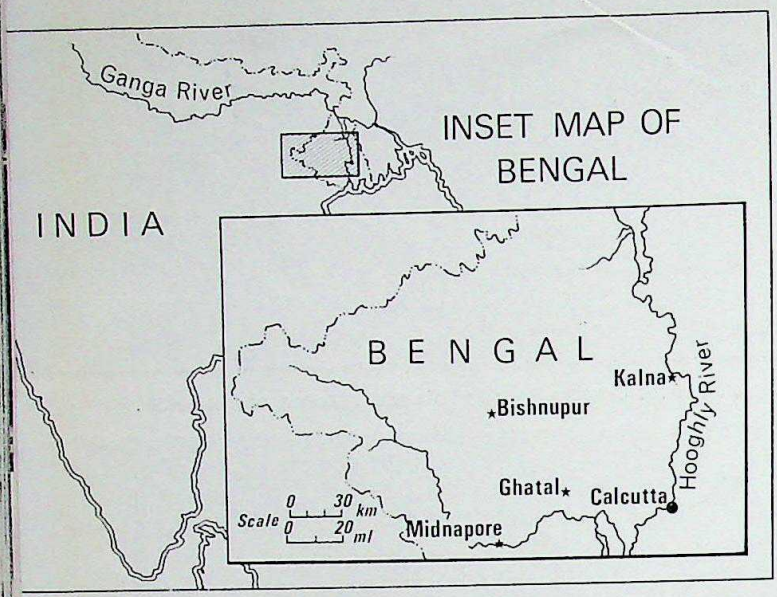

In its monumental appearance in brick, this hut is sometimes doubled to create a temple known in local parlance as Jor Bangla. At Bishnupur, one of the ancient capitals of Bengal, more than fifty temples dating from the seventeenth century onwards are found, lost in the narrow, overcrowded streets or standing isolated on the laterite flats outside the village. The Keshta Raya temple dates from the middle of the seventeenth century and is one of the most magnificent Jor Bangla temples in Bengal. Though presenting an outer appearance as a double unit, it actually functions as a single temple; the inner sanctuary surrounded by an ambulatory lit by windows on three sides and entered by a triple-arcaded porch on the fourth side. Above the twin curved gabled roofs rises a small chamber admitting light to the sanctuary within. In typical fashion, the outer walls are totally covered with terracotta panels displaying an enormous repertory of decorative motifs and narrative scenes.

Another common Bengali temple type is the seventeenth-century Vasudeva temple at Bansberia, a site not far from Calcutta. Here, a square sanctuary is surrounded on four sides by arcaded porticoes, one of which leads directly into it. The curved sloping roof on four sides is typical; more unusual is the tower rising above, which in itself is a miniature octagonal temple complete with windows and a pointed roof. Sometimes square corner turrets are added to this type of temple, each with its own curved and ridged spire, as at Bishnupur in the early seventeenth-century Shyama Raya temple. (The appearance of these temples is strikingly similar to certain examples of Christian architecture — especially Eastern Orthodox or even Armenian—but no direct stylistic contact seems to have occurred). Like the other temples at Bishnupur, these two are completely covered with terracotta plaques.

One of the more extraordinary designs for temple structures developed by Bengali architects can be seen in the *Rasamancha* of the Malla kings who ruled from Bishnupur in the late sixteenth and seventeenth centuries. This pyramidal building rises from open arcades leading into a corridor in which empty niches are built to house temporary images associated with particular festivals. During these times, clay images, most likely, were installed for the duration of the celebrations, removed on when the ceremonies ended. Such 'occasional' temples indicate the intimate connection between architecture and royal patronage and, presumably, these festivals were also royal occasions. The *Rasamancha* was erected by the ruler Bir Singha in 1587.

If the Bengali temples are unique for the variety of different building forms and their combinations, the decoration of these temples is equally remarkable for its vivid, figurative, animal and vegetal art. The outer surfaces of the temples are divided into different shaped panels by raised horizontal, vertical and curved mouldings decorated with foliage designs, mostly derived from the lotus flower, leaf or stalk. The late seventeenth-century Madana Mohana temple at Bishnupur has the lower part of its walls ornamented with rows of birds and animals. Here, geese and bulls, the latter led by attendants, form the base of the temple walls providing, as it were, a symbolic foundation—both the goose and the bull have significance in Indian mythology and are sometimes associated with two of the greatest of Hindu gods, Brahma and Shiva, respectively. Above, in square panels, various narrative activities take place.

Decorative panels on the outer walls of temples are sometimes circular, like that from the Shyama Raya temple at Bishnupur. At the centre is Krishna, characteristically playing the flute, with two attendant females. Surrounding him in two concentric circles are dancing cow-girls or *gopis,* adoring the god in his pastoral-erotic aspect. The raised mouldings dividing the figures are carved with an intricate foliage design.

More typical, however, is the decorative treatment reserved for the principal façade of the temple, the single- or triple-arcaded porch. Above the lobed arches set in solid, deeply-moulded columns, rise panels most terminated by curved cornices. Circular lotus panels and delicate borders frame the narrative scenes, frequently presenting dramatic episodes from the great Hindu epics. A typical example is the frieze from the late eighteenth-century Vrindava Chandra temple at Ghatal which spreads across the three panels. Here, as in many other temples, the scene depicted is the climax of the Ramayana—the war between the god-king Rama and the multi-headed demon of Lanka, Ravana. A detail from the eighteenth-century Vishnu temple at Srirampur illustrates the battle here, two chariots with temple-like roofs carry Rama and his brother, Lakshmana, on the left, and Ravana on the right. The horses rear up at each other at the centre of the composition. Even the fantastic monster faces of the axles holding the wheels of the chariots are engaged in combat, so also the monkey armies. Beneath is a row of miniature temples with Shiva lingams inside.

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This detail shows well the terracotta techniques employed by Bengali craftsmen. The narrative panels of this temple were carved after being set into place, but the decorative panels which frame them were moulded before insertion into the wall. The two techniques, one applied before the clay hardened, the other afterwards, are typically employed simultaneously. The exuberant composition, in which almost every space is utilised with activity, is characteristic; in fact, it is this figurative art which is perhaps the most outstanding sculptural achievement of the Bengali temples.

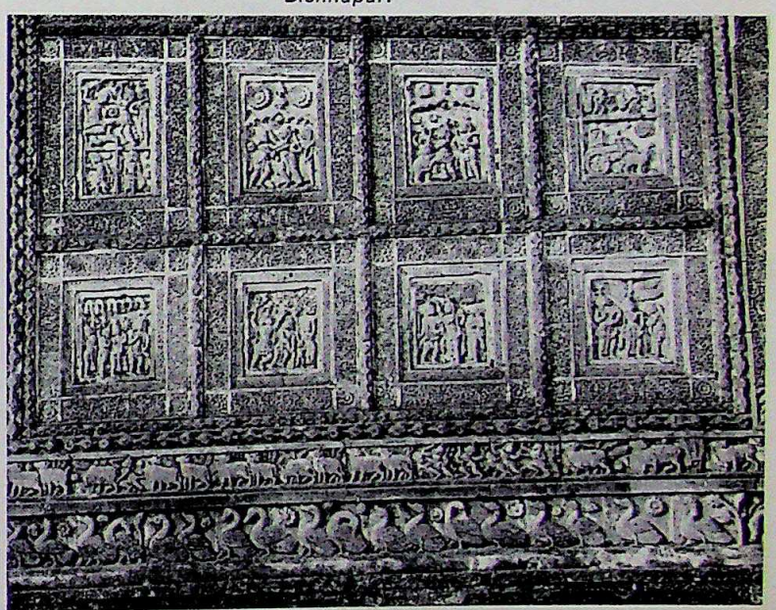
Throughout the many hundreds of examples of Bengali art, figurative themes range from mythological episodes, drawing on the great Indian epics, to depictions of folk tales, often of only a local significance: as well as the major gods and goddesses of Hinduism, numerous folk deities appear on the temples. In addition, the Bengali craftsmen were also fascinated by European art, probably inspired by the many examples which were becoming increasingly familiar in Bengal by the late eighteenth and early nineteenth centuries, due to the increased British influence. Some of the stucco panels from the Pratapeshvara temple at Kalna are carved with a delicacy suggesting that an actual woman might have served as a model. The torso of the woman, one hand casually resting on the balustrade, the other adjusting the hair, is strongly European in its composition. Indeed, Europeans themselves sometimes appear in temple sculptures and among the most picturesque of these are the boating scenes. Some of the seamen depicted on the eighteenth-century Lakshmi Janardana temple at Kankrakuli wear European hats, doubtless reflecting the curiosity that local artists had for foreigners.

Erotic and processional themes are also common to temples found in many parts of India. The frieze above the portico in the early nineteenth-century temple of Banka Rai Vishnu at Laoda depicts both human and animal sexual activity with an exuberance and frankness rare even in Indian art. The freshness of the carving of the stucco is equalled by an innate innocence in the treatment of the subject. The preference for processional themes indicates the ancient association of royalty with temple building. A panel from the Vishnu temple at Kalna shows a royal couple, musician and dancing girl, vigorously setting out in a chariot led by two grandly striding horses.

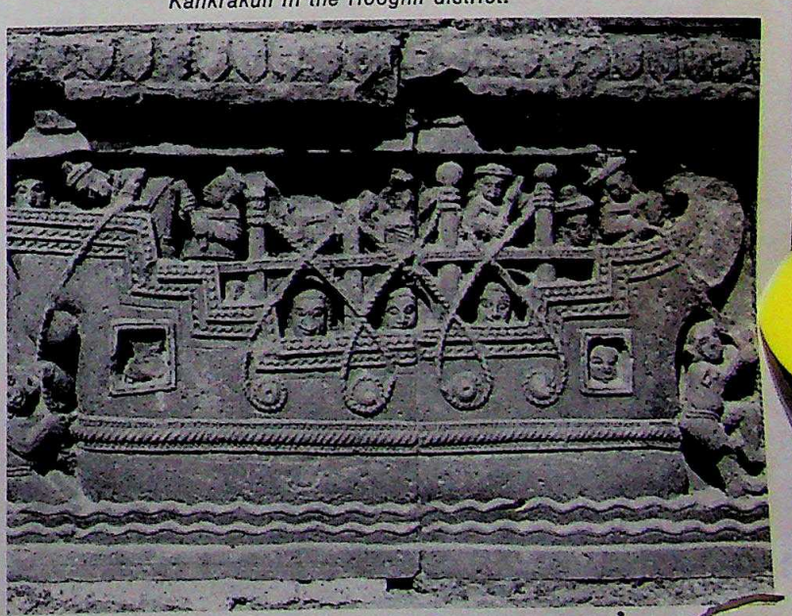
These and innumerable other carved plaques indicate the genius of the Bengali craftsman who, combining the Hindu art traditions established over many centuries with his own individual tastes and techniques, evolved an art in which vitality and inventiveness were, for a time, given a unique expression.

THE AUTHOR: George Michell, an Australian, is an architect and is Associate Editor of Art and Archaeology Research Papers, London.

Sculptures in brick: A chariot scene from the Temple of Vishnu at Kalna, and a series of panels from the Madan Mohan at Bishnupur.



A detail from a frieze at the Lakshmi Janardana Temple at Kankrakuli in the Hooghli district.



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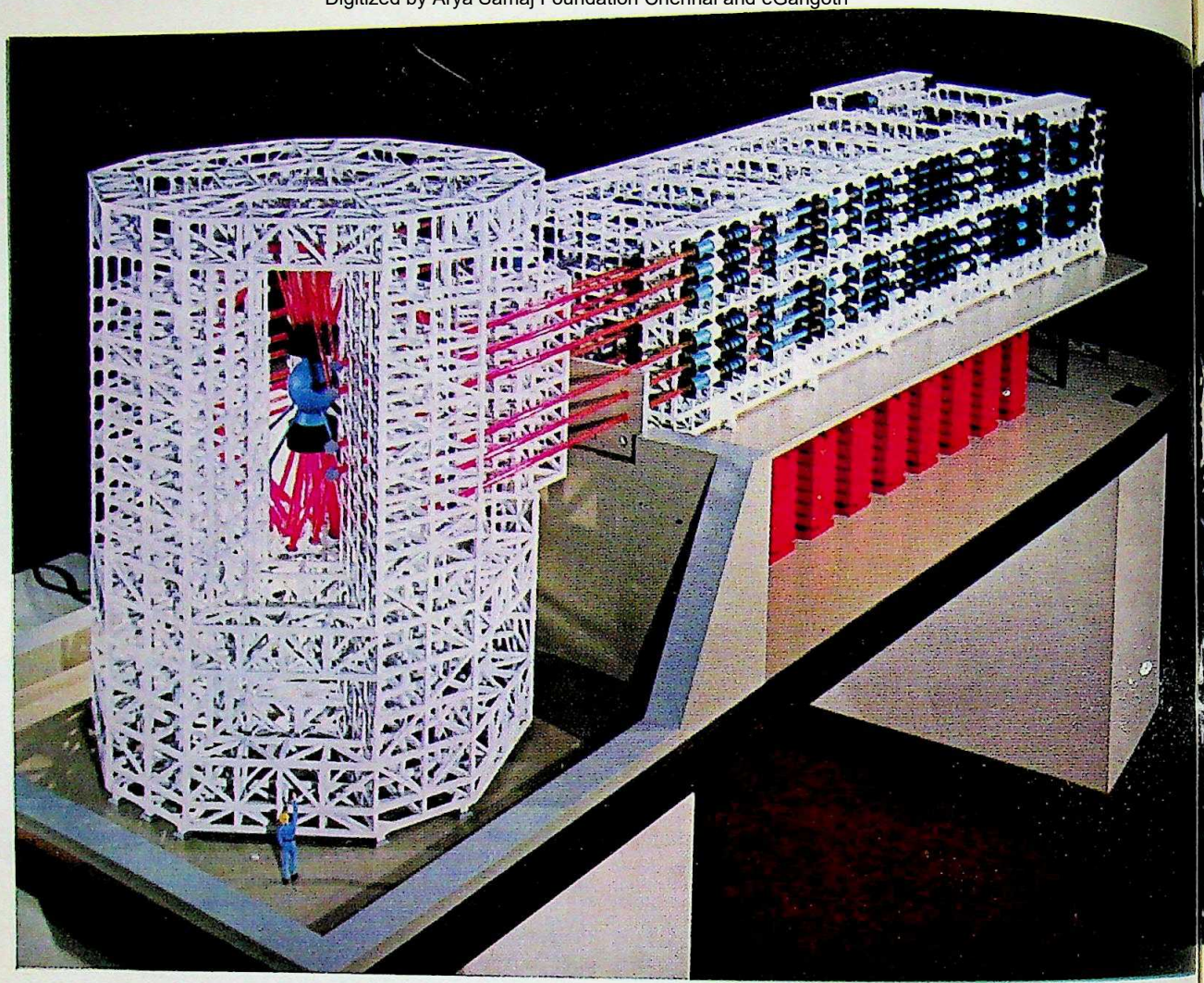

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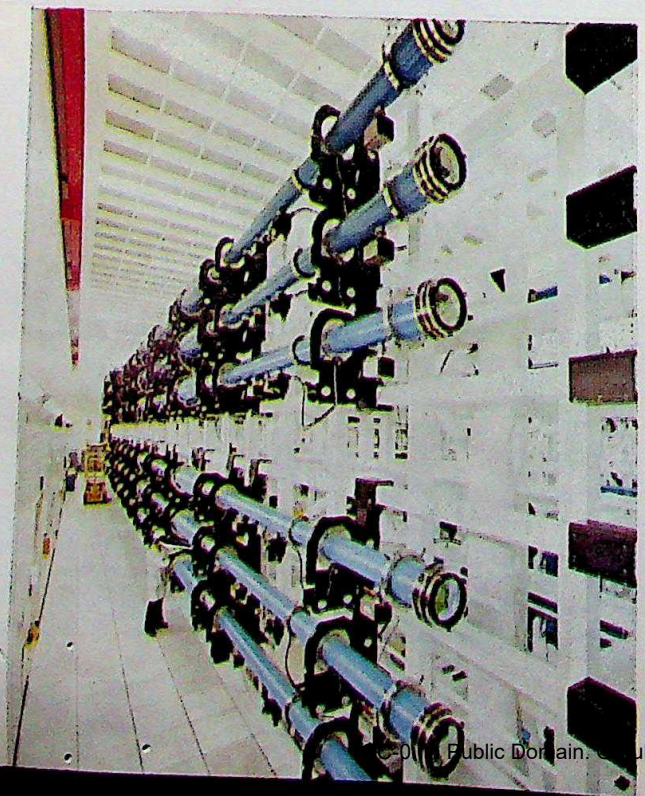

The difference between a mother-in-law coming to stay for a specified week's visit or an unspecified stay may seem to have nothing to do with generating and maintaining laboratory (later, commercial) heat of a million degrees centigrade.

But there is a comparison, as was shown in an interview done with Dr. John Emmett of the Livermore Laboratories in California when he was in Canberra a few weeks ago for the first world laser conference to be held in Australia. — Editor.

Above, the model of the Shiva laser system in use at the Lawrence Livermore Laboratory; on the right-hand side are twenty laser amplifier chains totalling a hundred and fifty feet in length; left, the eighty-foot-high target frame supporting the target chamber and turning mirrors. The apparatus will develop thirty million million watts of optical power. At left is a view of the laser amplifier chains, looking at the output end.

Opposite: A storage bank of lasers at the Lawrence Livermore Laboratory and a sketch of one of several designs for a laser fusion reactor at present under study for possible use in commercial production. Lithium is used as a heat exchange medium and a source of tritium fuel. For a thousand millionths of a second, the chamber will hold fusion fuel heated and compressed to temperatures and densities similar to those of the sun.

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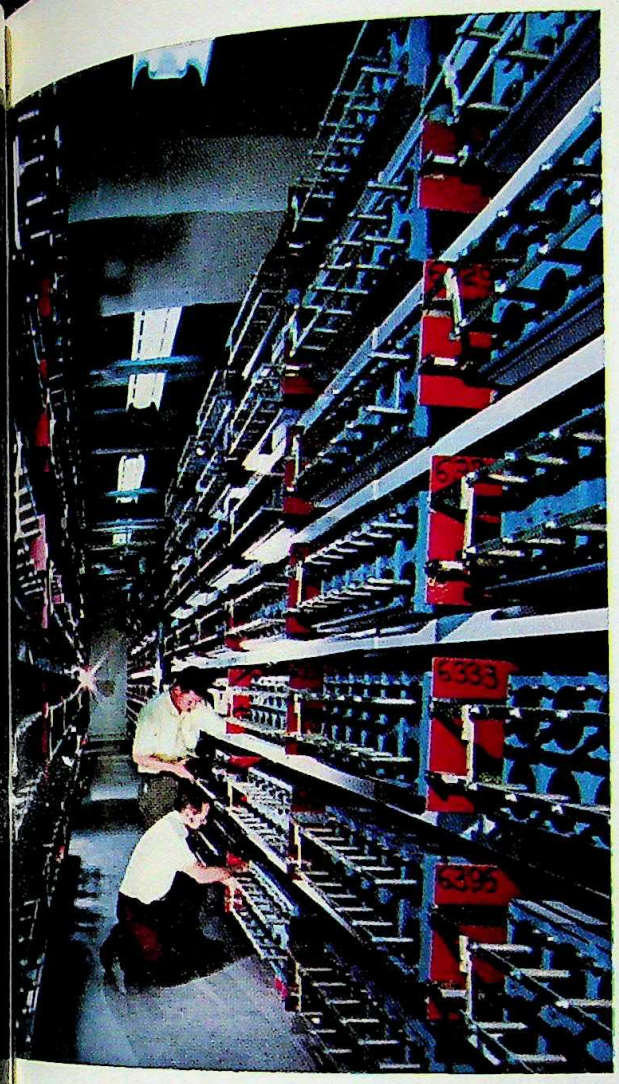
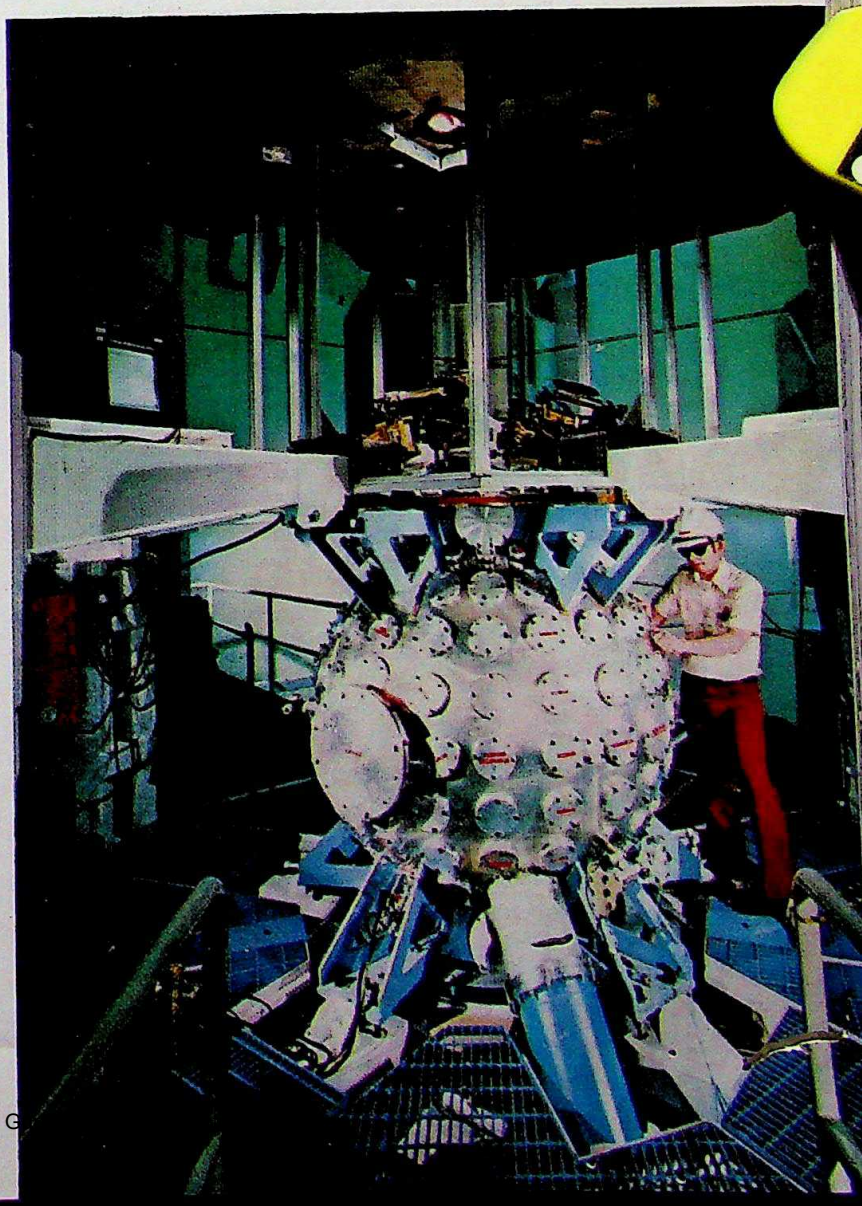
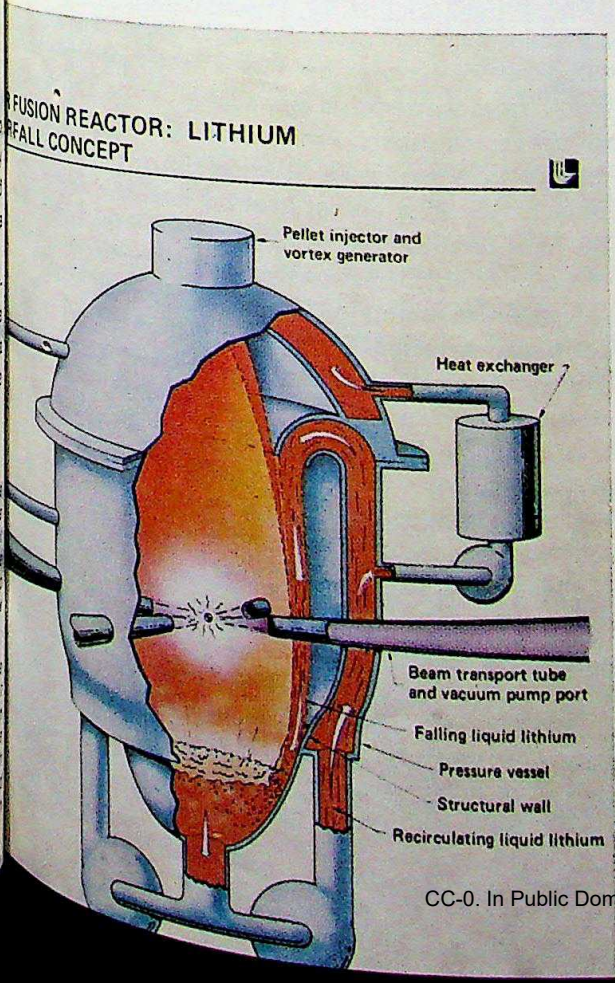


Argus, *completed in 1976, using multiple spatial filters to get high power, and below, the Shiva target chamber being readied for experimental instrumentation preparatory to the fusion of a small amount of deuterium-tritium gas contained in a target tinier than a grain of sand. The fusion will take place when the three hundred million million watts of optical power are focused on the minuscule target in the centre of this vacuum chamber.*

(All photographs and diagrams courtesy of the Lawrence Livermore Laboratory).





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SOMEONE was saying the other day here at the Conference that the use of the laser for nuclear fusion had killed the fission method. What do you think about this?

Well, I don't think that's really true. We haven't made fusion work yet; maybe we can make it work in the laboratory by, say, 1985 or 1987, but the first power plants would probably not be working before the late nineties or just after the turn of the century. So we will need fission for a few years to come. The work we are doing on fusion today will not really affect fission at all, unless people make the mistake of saying 'We like fusion a lot more, because it's cleaner, so let's not build any more fission plants but let's just wait for fusion.' That might be an acceptable decision to make in 1990; I don't think it's acceptable today. If we did make it today, we'd only be hoping that we might make fusion work, whereas I think that before we count on it we should wait until we've actually demonstrated it.

Why is fusion considered so much safer than fission?

When you burn uranium, you make the ash of that uranium a radioactive material. Some of that radioactive waste, called the actinides which are active for tremendous periods of time—almost geological time scales—must be disposed of in such a way that you can guarantee that it won't be spread into the environment—you've got to get it away from places where people live and bury it very, very deep. The ash of a fusion contains only helium—the kind of helium you fill children's balloons with. That's the main reason why we consider fusion so much more attractive than fission.

There's another reason why we consider it attractive. Even though here in Australia there is plenty of uranium, it is still a relatively scarce material throughout the world. On the other hand, the main fusion fuel is deuterium, which exists as one part in seven thousand in all the water on earth, and the energy release of burning fusion fuel is so great that one part in seven thousand in a gallon of water is the equivalent of three hundred gallons of oil. So what we're offering, ultimately, if we succeed, is a power plant that runs basically on water in which every gallon of water is worth three hundred gallons of gasoline and we give you most of the gallon of water back.

Now, let me be totally honest about the pros and cons of fission and fusion. We spoke about the ash that remains after you burn uranium, but I should add that there is another radioactive substance generated by both methods. When the uranium burns, or the deuterium and tritium burn—a large amount of the energy comes out as neutrons. The neutrons bang into the wall of the reactor, which is made of stainless steel, and heat it up, which is where we get the heat that we use to make steam and so on. But also, those neutrons make the wall of the reactor radioactive. However, the radioactivity that is induced in the stainless steel and concrete of the construction, whether it be a fission or fusion plant, is a very minimal problem compared to the radioactive ash of burning uran... For example, all we have to do when we've finished w... the fusion power plant is to let it cool down for a fe... years and then take the pieces out and bury them for... few tens—not thousands—of years and they stop be... radioactive. That material is very easy to handle.

To get back to the precipitate quotation with whic... started this interview, Dr Emmett, what part is the la... playing in the fusion method?

Well, basically, there is more than one approach ... burning fusion fuel. The problem is that you have to g... the fuel up to a hundred million degrees centigrade ... order to burn it and you have to keep it at that temper... ture long enough for a reasonable portion of it to burn u... There are a couple of ways of doing this. The first is a... stars do it: they hold the fuel in their centres at extreme... high temperatures and densities by their immense gra... tational fields. This is the case with the sun, for instance... The next way it can work is as in the atomic bomb, whe... the fuel is heated up instantly to a hundre... millio... degrees and it burns up so fast that it is consume... before it can fly apart. That's approximately what we're... going to try to do with the laser: scale down the amou... of fusion fuel to an amount about the size of a pinhea... but instead of heating it up by an atomic bomb devic... heat it by using a laser beam. We think that with a las... we can take it from room temperature to a hundred millio... degrees in a very small fraction of a billionth of a secon... and get it to burn and release its energy very rapidl... That's how the laser is applied to the fusion process.

How far have you got with it by now?

All that we've succeeded in doing is to heat a ve... small amount of fuel up to about eighty million degrees... so we're getting nearly the right kinds of temperatur... But what we have to do now is to get much bigger a... much more powerful lasers so we can heat enough fu... to get some energy released. Right now, the energ... release from the small amount of fuel we're heating ... actually less than we get from the laser shot at the pell... We have to get to the point at which we can heat a piec... of fusion fuel, say, of one or two millimetres in diamet... —just ten or twenty milligrammes in weight. We have ... get bigger lasers to get that amount of fuel to burn, a... if we can, we'll get a lot more energy. Then, you ca... start talking about building a power plant.

How, exactly, do you produce such intense heat fro... a laser beam?

It really depends on how big you build the lase... One of the designs we've been looking at at Livermo... where we will have just two lasers, the beams will b... two and a half metres in diameter and we will focu... those down to something of the order of two millimetre... Some of the research facilities we're building at Liv... more right now include a very small laser called Arg... with two beams and one facility, just completed, cal... Shiva, with twenty beams. We're asking for funds f...

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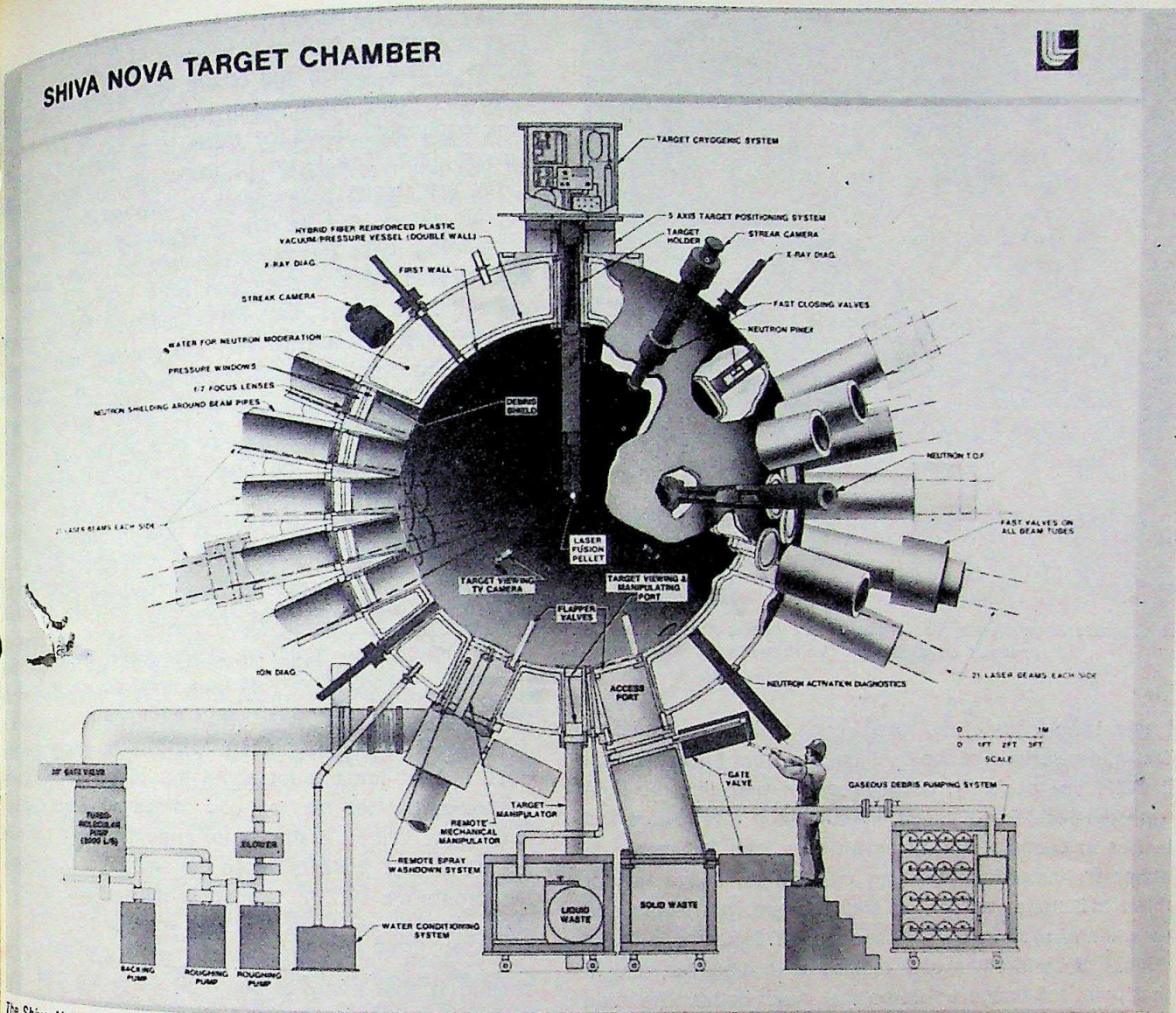

The Shiva Nova target chamber. The Nova laser fusion system makes heavy demands on the target chamber to contain micro-explosions that give up to 10 19 neutrons, plasma and X-rays with yields totalling about twenty kilograms of high explosive. This force means that careful attention must be given to material strength, shock effects and windows for the laser beams.

to build a much larger laser ten or twenty times as powerful as Shiva. We think it's with that laser, which we call Nova, that we'll be able to prove that this works in the laboratory. And once we've proved it in the lab., we can start planning on it—but not until then.

How long do you reckon it will take for it to work in the laboratory, and how much longer will it take to have it working commercially?

I think if scientists in the field are to continue to be funded—everywhere in the world—not only the United States, but in Japan, Britain, Russia, Australia—I think we should be able to prove that we can do it by 1983 or 1984. After that comes the very difficult problem of engineering an economic kind of reactor. It's people generally who are going to determine how fast this can happen. How fast we can begin to exploit it once the scientific break-through has occurred depends not so much on the scientist, but on how important it is to various governments to push it. You know, John Kennedy in 1960 said: 'We're going to put a man on the moon by the end of the decade' and we mobilised the best scientific and engineering talent in the United States and we got a man on the moon by the end of the decade.

After we've proved that we can get the fusion method working in a laboratory; if a President of the United States wanted to stand up and say: 'We'll have nuclear fusion operating in a decade', we'd have it. We need that kind of commitment, but if we don't have that kind of commitment, it will take another twenty years. In the long run, it really depends on how important people think it is.

Exactly how does the laser generate such incredible amounts of heat?

That's a very difficult question to answer. First of all, if you take a magnifying glass and focus an image of the sun on a piece of paper, just the energy coming from the sun will cause that bit of paper to burn. The amazing thing about a laser is that when I focus the light from the sun with that magnifying glass, I get a little image of the sun, a very small one, maybe one or two millimetres in diameter or something like that, and regardless of how

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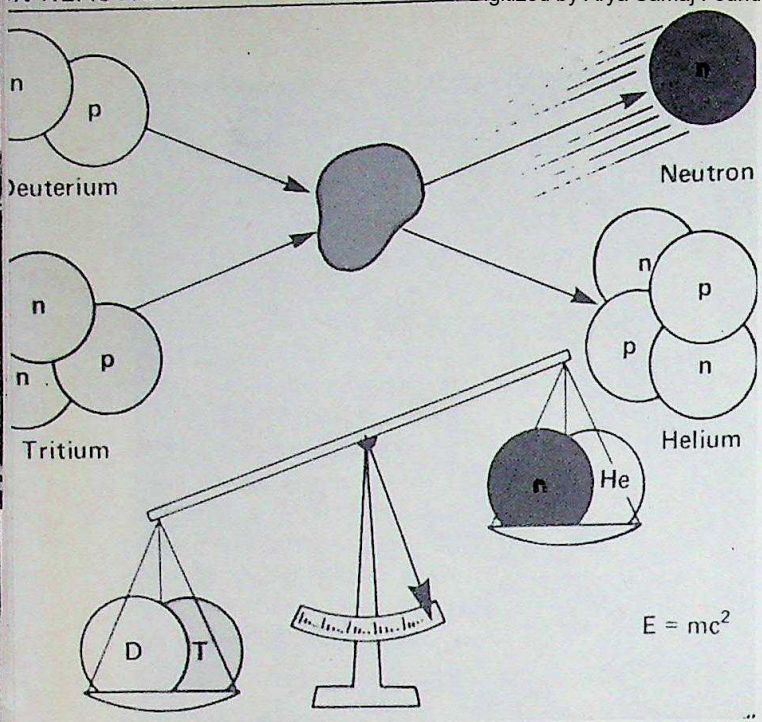

A diagram showing the deuterium-tritium fusion reaction in the process described in the interview.

I adjust the focus of the lens, I can't make it any smaller. The characteristic of the light coming from a laser is that it will focus *perfectly,* not just sort of well, like the light from the sun. For instance, if you take a laser beam five inches in diameter and focus it with a lens five inches in diameter, instead of finishing up with an image two or three millimetres across, as with the sun, you would end up with a spot that was a couple of thousandths or a couple of hundredths of a millimetre in diameter, and at that point the image would be that much hotter. The main difference is that the laser light is so perfect that it can focus perfectly. It's this that enables us to get the laser to generate such high temperatures. After all, if you hold your hand out to the sun, you can barely feel the warmth, but if you reduce it to a little spot, you can burn a piece of paper. You can imagine that if you could focus that sun down to a spot a thousand times smaller in area than the spot, the heat would be tremendous.

But you can put your hand in front of a laser beam without much discomfort, can't you?

In some laser beams you could, but the lasers we're building now are so powerful that even the unfocused beams of light would burn your hand. So you can imagine how incredibly intense they would be at perfect focus.

For focusing down to the minute areas you're talking about, the equipment would have to be tremendously accurate and the glass in the laser tubes would have to be perfect.

In the lasers we're building today, we're using a very large number of precision optical components: in the Shiva complex, for example, we have seventeen hundred precision optical components and the optical materials have been made for us all over the world. For instance, a significant contribution to those components has co from a Japanese optical firm; some have come from firm in the United States and others from a firm in Germany ... What I really think you're wondering is how this co plex equipment could be made to fit into a commercia power plant. The kinds of things we're reckoning wi today are things we've built to optimise experiments i the laboratory, but we are doing some studies on wa of building these things very simply, and make them les complicated so that they can work without focusing s perfectly. Actually, the first time you do somethi scientifically, it's always very complicated, and then yo understand it and find easier and simpler ways of doing i

When we get a really big power plant, we're not goin to hit something that's the size of a human hair; we'll b dealing with pellets the size of children's marbles, an because the lasers will be so powerful they won't have t focus down so far as they do now in order to get th same amount of heat. We've got a number of technica solutions in our heads: we haven't proved them y , bu I really think we can work them out.

On the general question of the power c which everyone realises is very serious, what do you think abou coal? Do you see any dangers in that?

There are very significant dangers in using a lot o coal. I don't know a lot about the coal deposits here i Australia, but let me tell you something about the wa it is in the United States. A lot of people die in coal min accidents and if we increase the amount of coal we us the proportion will get bigger. In the western part of th United States we have coal that you can strip-mine—yo call it open cut mining—with great scoop shovels. Th trouble is that many of our deposits in this area are i range land, which is good cattle grazing country. An many of us don't want to see hundreds of square mile of that country just scooped up and almost laid was through strip mining.

Then, if you burn a lot of coal, radioactive material released in small amounts, but probably more than i released by nuclear power—at the moment, anyway. Th second thing is that a lot of dust particles—fly-ash—ge into the atmosphere and this is not good for people breathe. Of course, we try to take that out with precipitin and things like that as best we can. A lot of sulph dioxide gets into the air; over a period of time, million of tons of sulphur dioxide have been released, even whe we try to de-sulphurise coal; as well, there's a lot o nitrogen dioxide. Besides that, the major substance re leased when you burn coal is carbon dioxide and a lo of people are worried that if we burn all the fossil fue left—oil and coal mainly—we would add so much carbo dioxide to the atmosphere that we would radically chang the climate and environment on earth. We don't ful understand that today, but we think it's a very seriou risk.

In the United States and in Australia, there's enoug coal to last us, say, two hundred years, but I think w

should very seri go on using large to rely on coal before we have or fusion or wha think that we ou dioxide into the entirely on coal,

Overall you do future of the wor

On the contrar And the reason talking about it thing about it. Y to fall short of t the early and la the turn of the major dislocation And somehow, we'll o somethi problem. hav start making the coal-fired power we're going to b use nuclear fissi we're going to h

For example, there are only inexhaustible: th fusion and the energy in space can get the wor and I think we coal, strip-mining that we only hav we can plan and what we have to of oil and gettin energy such as how long the pe

But we should have to be done to be built. If we to make the tra thirty years—I th that. But if we d options—the ine are possible, wh they'll cost us, t be arbitrarily lon they don't want use of coal bec So the importan ance of working as to when we nuclear fission.

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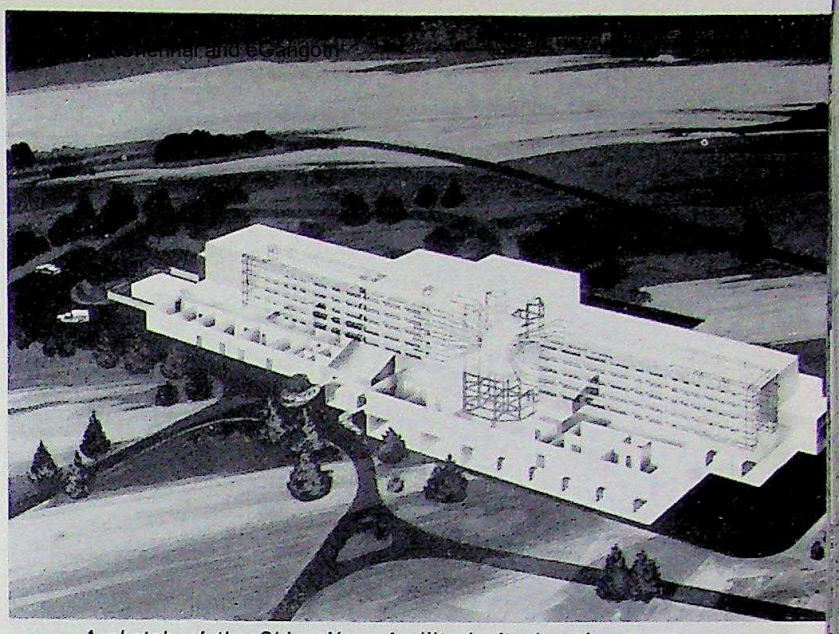
should very seriously consider whether or not we should go on using large amounts of coal. Certainly, we will have to rely on coal for the next twenty or thirty years or so before we have some alternatives, whether these be solar or fusion or whatever they may turn out to be, but I don't think that we ought to release all the carbon and sulphur dioxide into the air that would get there if we were to run entirely on coal, for instance.

Overall you don't seem to be too distressed about the future of the world as far as energy is concerned?

On the contrary, I'm very distressed about the situation. And the reason I'm distressed is because everybody's talking about it and nobody is really wanting to do anything about it. You know, the world oil supply is going to fall short of the world oil demand some time between the early and late eighties—at the very latest, at about the turn of the century. Now, that is going to cause a major dislocation in the industrial nations of the world. And somehow, we keep thinking 'When we get there, we'll do something about it'. If we're going to solve that problem, we have to start solving it today, we have to start making the hard decisions today, about how many coal-fired power plants, how many nuclear power plants we're going to build. If we're going to use coal and to use nuclear fission energy, we ought to know how long we're going to have to use those things.

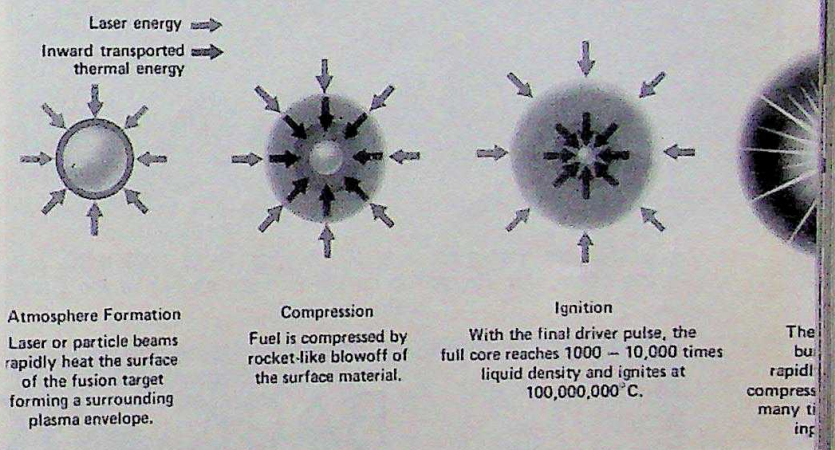
For example, we all know that in the very long term there are only three energy sources that are nearly inexhaustible: the first is breeder reactors, the second is fusion and the third is large-scale collection of solar energy in space and beaming it down to earth. Now, we can get the world to accept the use of fission reactors and I think we can get the world to accept the use of coal, strip-mining and all that goes with it if we tell them that we only have to do it for thirty years. That is, I think we can plan and get the people of the world to accept what we have to do in the interim, between running out of oil and getting a start with inexhaustible sources of energy such as fusion and solar, provided we can say how long the period will be.

But we should tell them how much strip-mining will have to be done and how many fission reactors will have to be built. If we tell them that this is what we have to do to make the transition—that we've got to do it for, say, thirty years—I think we can all buckle down and accept that. But if we don't get to work on the advanced energy options—the inexhaustible ones—so that we know they are possible, when we can have them and how much they'll cost us, then this intermediate period of time can be arbitrarily long. I think that's what upsets people today: they don't want to go into heavy use of nuclear or heavy use of coal because they don't know when it will end. So the importance of working on fusion and the importance of working on solar and so on is to get the answer as to when we can end the use of coal and the use of nuclear fission.

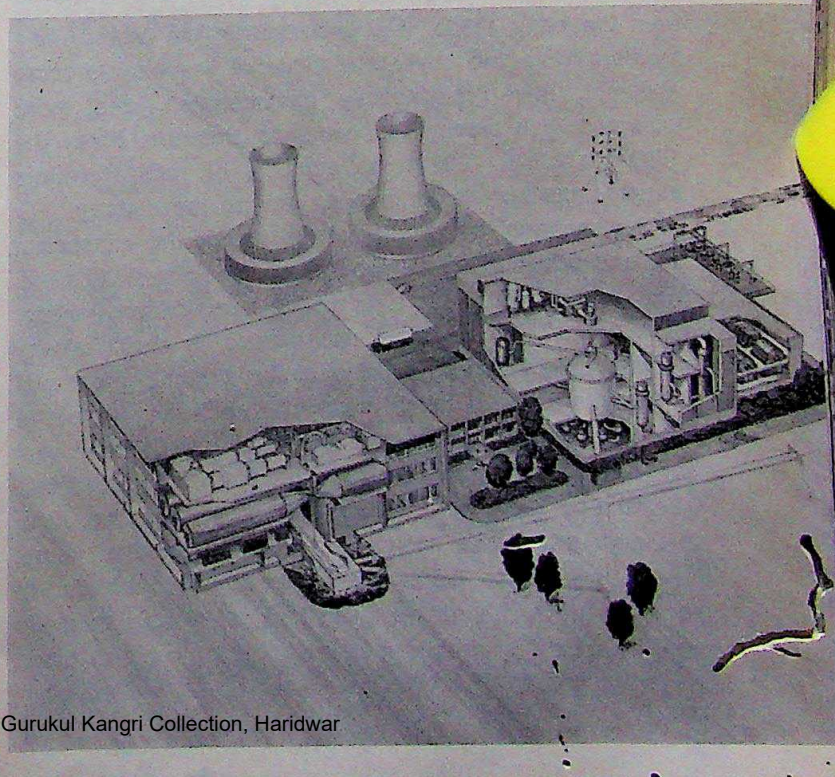


A sketch of the Shiva Nova facility in its housing.

INERTIAL CONFINEMENT FUSION CONCEPT



A diagrammatic representation of the process that takes place in the target chamber during fusion, and a sketch of a possible future fusion power plant, showing the high-power laser system on the left, and the reactor vessel (see page 7), on the right.



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A gold-miner 'Returned from Mt. Ragged Rush 1000 miles trip in the bush'. Mt. Ragged is on the western shores of the Great Australian Bight.

Francis Birtles, well-known earlier this century for his rides from Perth to Sydney (ca. 4000 kilometres), around the continent and the first person to drive a car across the Nullarbor Plain

BACK INTO ITS OWN

Jim Fitzgerald

THE pneumatic-tyred safety bicycle, available in Australia from the early 1890s, was important in the inland. And nowhere were the utility and value of the bicycle more apparent, more convincingly demonstrated, and more accepted than among the country's shearers. From the 1890s to about 1920 large numbers of rural travellers adopted the bicycle for moving around the country.

The shearers' travel alternatives across the expansive, hot and arid continent were limited, and generally slow. They could walk, ride a horse or horse-driven vehicle, or in some circumstances use camels. A small railway network penetrated only a few areas. Water-borne travel in the interior was limited to the Murray-Darling system in the southeast. In either case the rural traveller had vast spaces to cross. Motor vehicles, although introduced into Australia by 1900, were initially extremely expensive. Also, in many rural areas petrol, and over a period of years, repairs and parts were often impossible to obtain. In addition, the harsh nature, even lack, of Australian roads and the reliability problems of early motor vehicles made their use questionable. It was not until after the first world war that they were generally feasible and commonly available for rural transport.

In this context the bicycle proved an excellent means of transport for shearers and related workers, who would travel several thousand miles a year during the course of a shearing season. For one thing, then the bicycle was extremely fast. A cyclist could commonly travel two to three times as fast as a horse or camel in most rural conditions. By 1898 bush cyclists had ridden across the Nullarbor from Fremantle to Adelaide in as little as eighteen and half days, and from Darwin to Adelaide nearly two thousand miles, in only twenty-eight days. But more important, the bicycle was particularly suited to the shearers' work style. After several days or weeks of shearing the men were extremely fit and capable of mounting the machine and immediately pedalling off on a one-day ride of up to a hundred miles or more. In contrast neither horses, possibly unexercised and poorly fed, nor walkers, could remotely match such performances.

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The bicycle had been widely used throughout Western Australian goldfields beginning at least in late 1892, and by 1900 numerous riders had crisscrossed the continent. By mid-1895 at least one cyclist had demonstrated the mustering and boundary riding potential of the machine to southwestern Queensland pastoralists. Occasional property owners eventually experimented with their own bicycles. The first known reference to the bicycle's use by shearers dates from about mid-1897, by which time a rider had reportedly covered nearly two thousand miles in the New South Wales interior. Two months later four shearers were cited as 'careering from station to station' on their bicycles.

The sudden focusing of attention upon cyclists in pastoral areas led a cartoonist of the weekly *Bulletin* to suggest the eventual extinction of the horse, and E. S. Sorensen, in a typical *Bulletin* reaction to all cycling matters, to pen 'The Bicycle's Gone to the Bush':

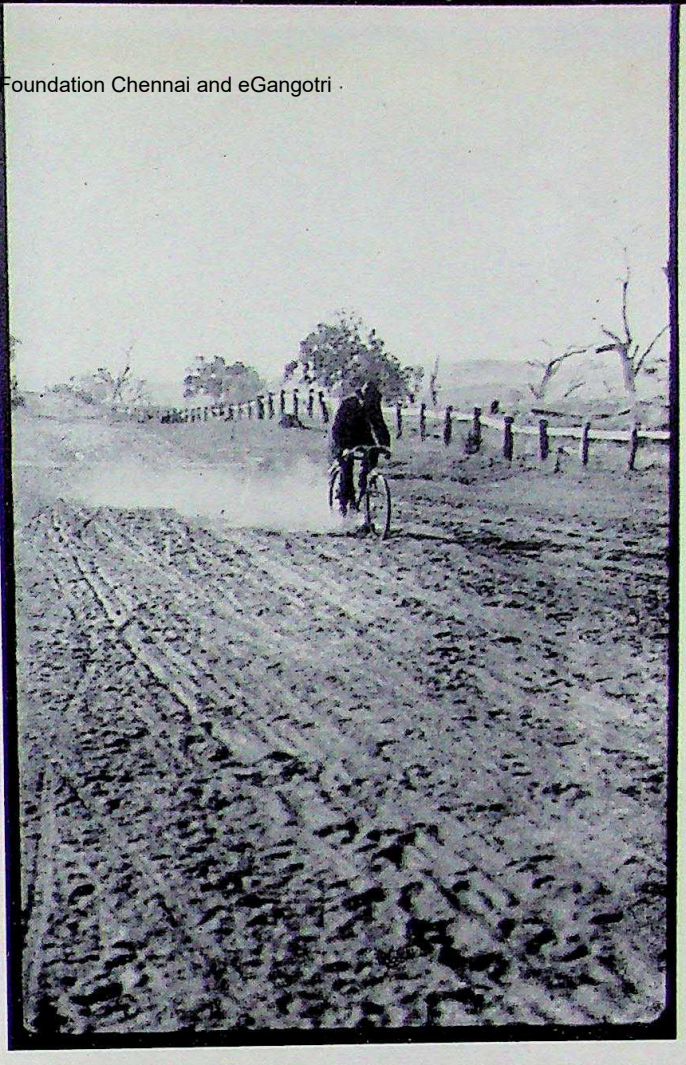
It's all up the tree with the swagmen,
It's all over now with the tramp,
And the horsemen can dally with bagmen,
For they're wanted no more on the camp.
The [illegible] drooping in droves from the west-track,
With tidings of woe to their push,
For the inside, they say, is the best track,
Since the bicycle's gone to the bush.

.....

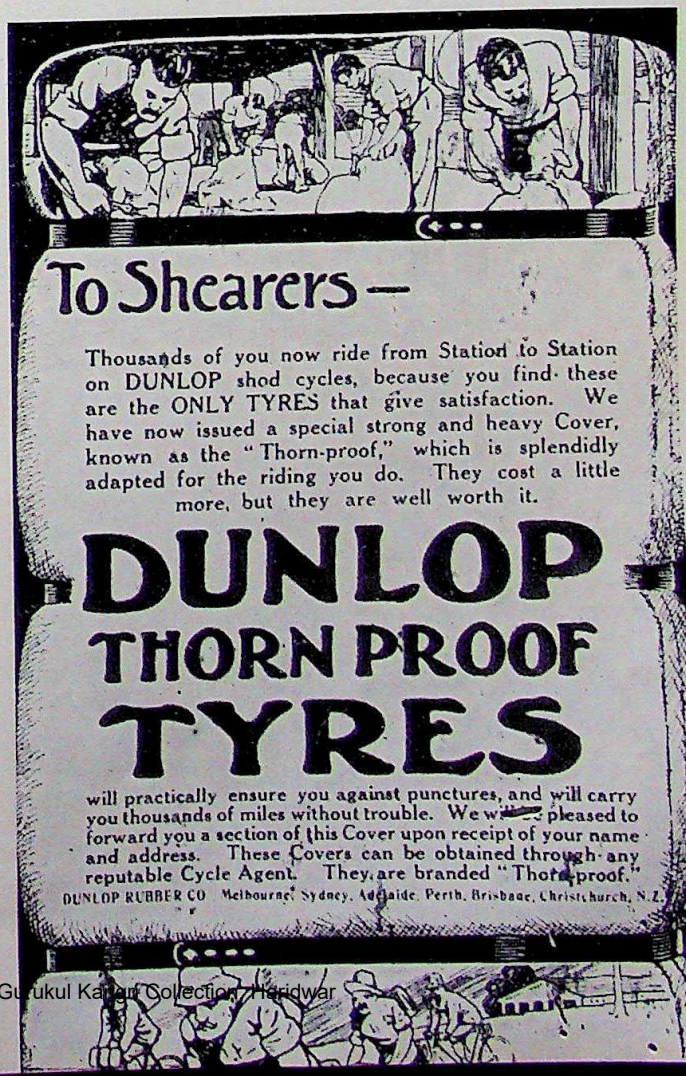
On the stations out back they are riding
'Long Boundary and rabbit-proof fence;
And rouseabouts swiftly are gliding
With shearers and tank-seekers hence;
They're rounding-up sheep and scrub-cattle,
They stem the most desperate rush —
E'en the Myalls will pedal to battle
On the bikes that have gone to the bush.

Despite such tongue-in-cheek attitudes, the bicycle was increasingly adopted by shearers over the next few years. A crucial factor in the rate of acceptance, aside from the machine's speed, was that the bicycle required neither food nor water. In the drought-prone rural Australian environment, also plagued in some areas with poisonous plants, the machine proved a blessing. During the years 1895 to 1903, in particular, Australia suffered from the most severe drought in its recorded history. Nearly half the sheep and cattle in the country were lost. Wells dried up and forage was depleted over large areas. In some places fees were charged for drinking-water for livestock, although men could drink for free. So it is no wonder that more shearers chose the rapid, human-engined device.

There were problems, of course. Many thorny plants sometimes played havoc with tyres. These plants were known variously as 'bindy-eye', 'prickly jacks', 'double-gees', 'goatsheads', 'galvanised burrs', 'giant bulls heads', and 'three-cornered jacks', among others. The single most troublesome and widespread plant appears to have been the *Emex australias*, known by several names, originally introduced from South Africa. However, riders were also



A lonely cyclist on an outback Victorian road about 1900 and a tyre advertisement claiming to ease conditions for bush riders.



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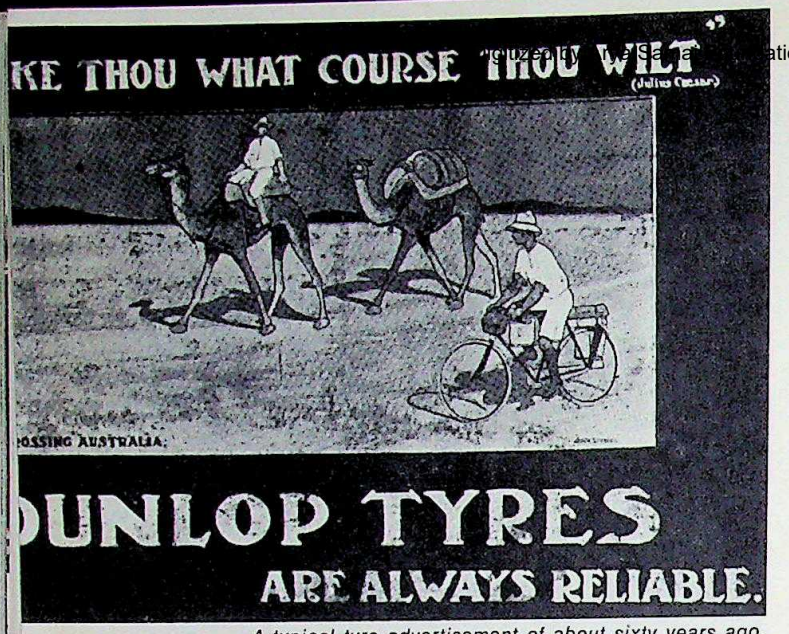

A typical tyre advertisement of about sixty years ago.

Arthur Richardson, the first man to cycle more than a thousand miles across the Nullarbor Plain, from Coolgardie to Adelaide (1896) in exactly one month. He is shown with all the equipment he carried acoss the almost uninhabited, waterless area. Below, the Lyons brothers, of Tasmania, regulars on the New South Wales shearing circuit about the turn of the century.

plagued by rocks, ruts in the roads, stone chips, gla nails, stumps, roots and other road hazards. Yet, tyres used by many rural travellers were of far bet quality than those commonly used today for smoot surfaces. Specifically the Thorn-Proof tyre, develope by Dunlop, was very effective in resisting puncture Although thicker, and hence heavier to push than t normal roadster tyre, the Thorn-Proofs were well wor the effort in many parts of the continent. There a numerous records of cyclists riding thousands of mil with only one or two punctures, often none at all. Rath than being the weak link in the bicyclist's equipmen the resiliency and relatively low rolling friction of th pneumatic tyre and the puncture resistance of the Thor Proofs were what made the bicycle ultimately feasibl for extensive rural use.

The extent of the bicycle's use was described by journalist during a trip through western New South Wale in 1909. He likened the shearers to a flock of gala moving across the paddocks, and 'the sign of them wa their bicycles', which 'had spread through the countr as fast as the rabbit. It is extraordinary in what unlike places one finds those tyre-tracks'. While [illegible] shearers did prefer to walk or use a horse, eyewitnesses suggest that at least half the shearers used bicycles early this century. In some areas former shearers have indicated that virtually everyone in the shed mounted them. The use was so integral with the shearing scene that the New South Wales Pastoralists' Union's Shed Hands Agreement eventnally included a clause requiring propert owners to provide bicycle sheds as well as food, bunks and other amenities for the workers.

An excellent illustration of the use of the bicycle provided by a group of Tasmanian shearers who worked the eastern states' circuits. The two gentlemen pictured at Deniliquin, circa 1910 (left, below), were part of a group that annually left Tasmania in early March. They returned home by about the beginning of October for the Tasmanian season. The group took a boat to Melbourne then the train to Wagga. They carried their bicycles with them both ways, stocking up on perishable foods on the mainland.

The men travelled as lightly as possible, for the head winds, dirt roads, tracks and soil over which the pedalled required much effort. None the less, for a several month journey, their machines were heavily loaded. They carried canvas water bags (weighing ten pounds per gallon), billies, bedding, clothing, and cycle repairs. The latter normally included some chain links, spokes, tubes, puncture repair kits, pump and tools. Bedding consisted of rough grey blankets and a rug. Food was carried in a canvas bag hung within the frame; waterbags were also commonly carried there. Bulky bedding was tied over the back wheel. Smaller and lighter bundles such as clothing, were commonly secured to the handle bars or forks. A touch of home was provided by the 'Tasmanian Bluey', a blue-grey all wool overcoat that doubled as additional bedding.

Australia's most ... the gruelling Par... of several hundre...

Each year the... cycling journeys... places as Jerilo... dee, Wilcannia,... be considered... were at one tim... they were not h... or teamsters. T... waggon and rid... welcomed. At t... to Tasmania to... rides in the Riv... jaunts in a lan... ever, it would ... annual pilgrima... until the first w... the armed forc... some of them,...

The bicycle ... perception of t... group of shea... year by using ... forty-two miles ... a couple of sh... returning to th...

In retrospect ... the shearers' ... the situation ha... few Australians ...

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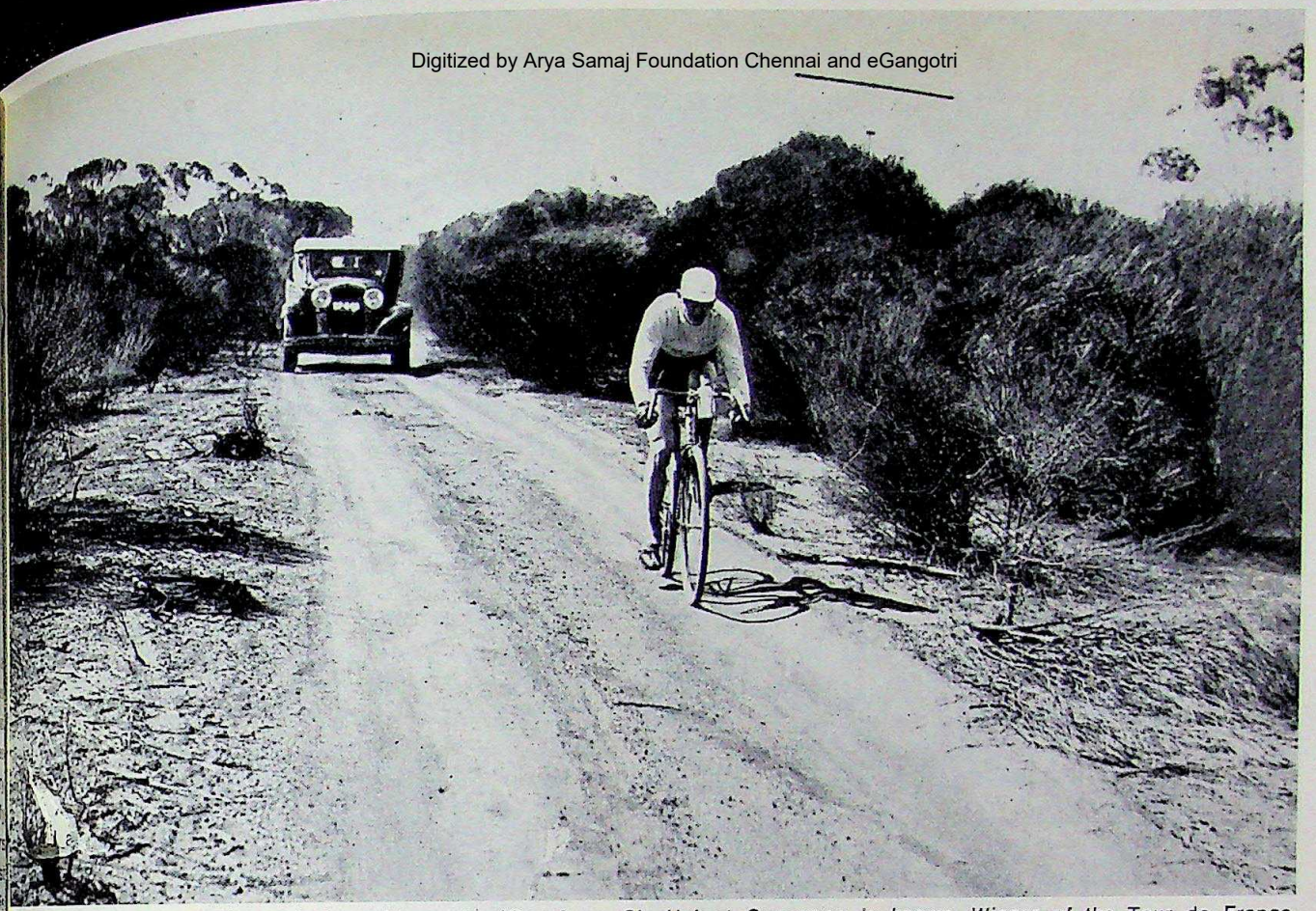

Australia's most famous cyclist and of world repute, 'Oppy', as Sir Hubert Opperman is known. Winner of the Tour de France, *the gruelling* Paris-Brest-Paris *(over seven hundred miles non-stop) and in Australia, record-breaking veteran of many tough races of several hundred miles, including the Kalgoorlie-Perth Marathon in which he is shown above (1933). Sir Hubert later became a Federal Government Minister and High Commissioner to Malta. (Photo, courtesy Sir Hubert.)*

Each year they covered several thousand miles in their cycling journeys. The annual circuit took them to such places as Jerilderie, Narrandera, Yanco, Ivanhoe, Menindee, Wilcannia, and Tibooburra. Today these rides would be considered major cycle trips; for many shearers they were at one time but part of the work routine. As such, they were not hesitant to accept assistance from hawkers or teamsters. The opportunity to throw the load on to a waggon and ride or walk unencumbered for a while was welcomed. At the end of the season the men returned to Tasmania to continue shearing. Those long, dusty, hot rides in the Riverina and beyond were replaced by short jaunts in a land of greenery for a while. Next year, however, it would begin again. For this particular group the annual pilgrimage continued from the turn of the century until the first world war. For several of them service with the armed forces meant the end of the routine; and for some of them, life itself.

The bicycle obviously radically altered the workers' perception of time and distance. In South Australia one group of shearers could get in some extra work each year by using it. They pedalled the five hundred and forty-two miles north along the Strzelecki Track to shear a couple of sheds in south-western Queensland prior to returning to their home districts for the local season.

In retrospect perhaps the most fascinating aspect of the shearers' use of the bicycle is the extent to which the situation has generally gone unrecorded. As a result, few Australians today are aware of the past usage. And, surprisingly, when the cyclist was nearly ubiquitous, few ever bothered to write about him. 'Banjo' Paterson, for example, only wrote one poem concerning rural cycling, and that lampooned a horseman's inability to master the machine. And yet Paterson photographed a squad of bicycle-mounted strike-breakers in Coonamble in 1902 and, as a result of his travels, could not have failed to notice its prevalence in other situations. And rare is the history book that even mentions bicycles in a discussion of rural travel; those few that do dismiss the bicycle in a few sentences.

In a country long enamoured by the rural image, characterised by the stockman, an apparently incongruous technical device like the bicycle may have struck a wrong note or, more likely, no note at all. Probably those who wrote of the land, the people, and the way of life had pre-coloured visions of what they would see. Unquestionably there are always romantic, striking and highly publishable things to say about the man mounted high 'on a stallion as fleet as the wind'. But the bush biker, sitting at eye level, with an inanimate machine 'looking like an overloaded towel horse', was he that much less imageable? The degree to which the shearers and other rural cyclists have been ignored is worth speculating about. To explain why is to demonstrate a real grasp of Australian culture.

The author is a Ph.D. Research Scholar at the Australian National University, Canberra.

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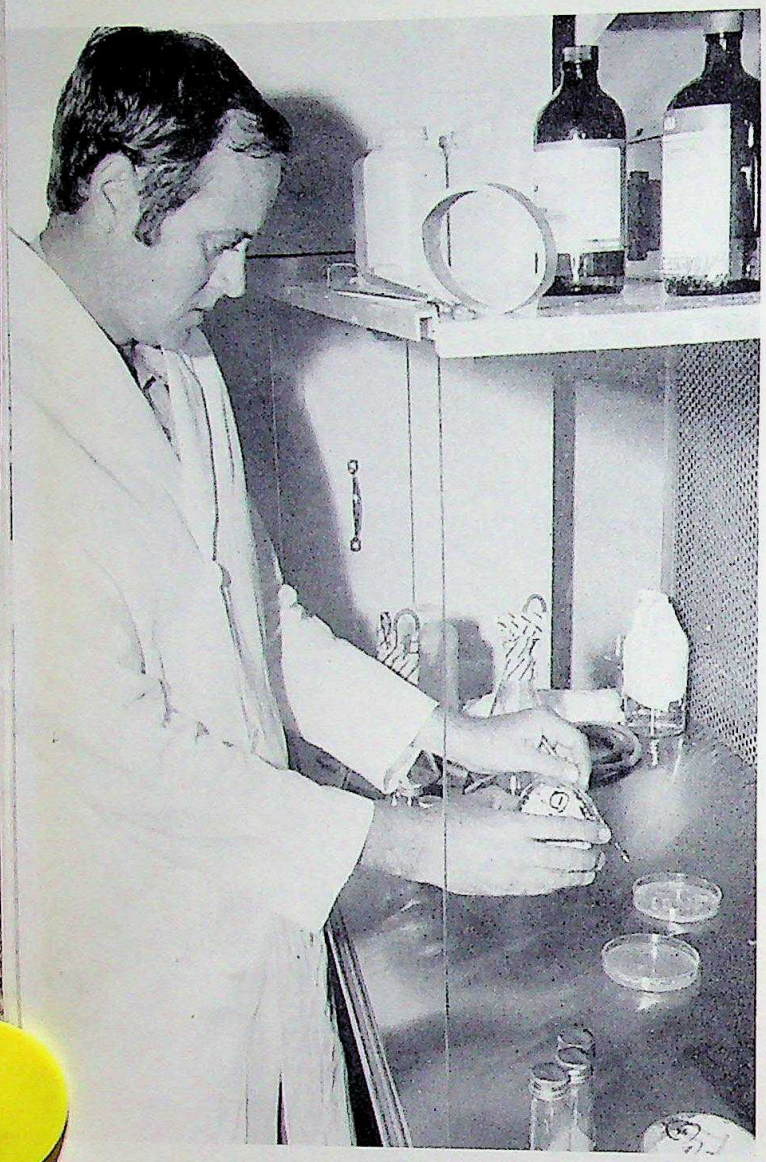
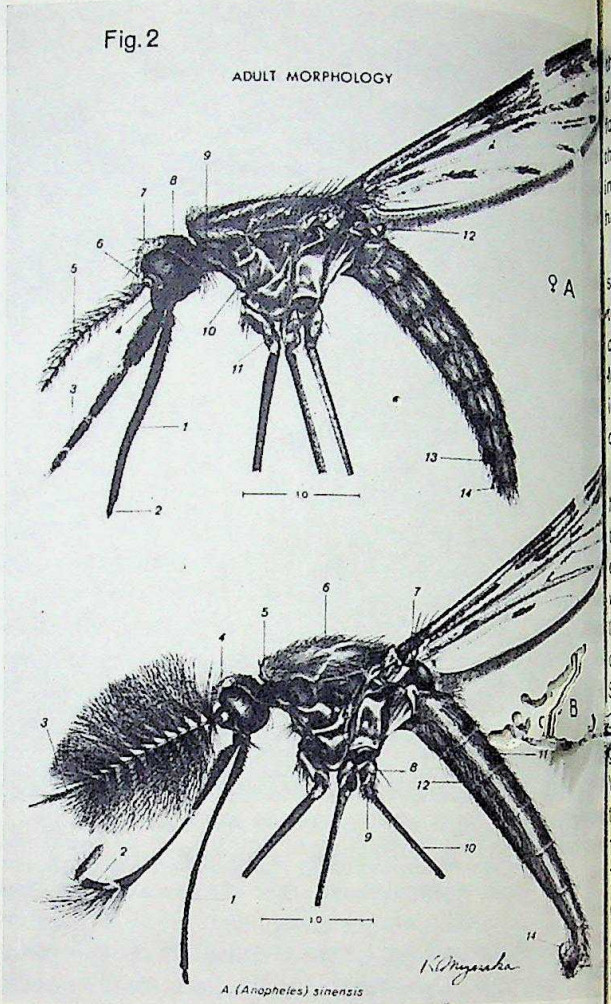


Fig. 2



Major Tony Sweeney, of the Malaria Research Unit, selecti culicinomyces spores for inoculation and sub-culture. To pr duce the spores needed for breeding mosquito larvae, t growing fungus is injected into five-litre flasks of special bro (Photo: Army Public Relations.) A diagram of one kind anopheles (malaria-carrying) mosquito, by courtesy Dr. D Colless, C.S.I.R.O.

THE STING THAT STAYS

Shaun McIlrai

AUSTRALIA, on the edge of a fulminating malarial area, has recently established a malaria research unit of international standard. It is unusual for two reasons: it is conducted by the Australian Army, and it had as its guiding force an Indian civilian.

Dr Amar Pradash Ray, widely regarded as the world's most experienced malariologist, came to Sydney in 1973 when malaria research was conducted in one small room at the School of Public Health and Tropical Medicine within the grounds of Sydney University. Over the next four years Dr Ray supervised the transfer of the unit Ingleburn Army Camp, on the southern outskirts Sydney, where it grew to a complex of buildings with Army staff of doctors, entomologists and technicians.

If the Army seems an unlikely place for medical search, its interest in malaria is easily perceived. malaria endemic on Australia's doorstep in New Guine the disease could assume serious importance in military threat to the approaches to the continent. vivid in the minds of Army planners is the experience

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the second world war, when malaria prophylaxis with the drug Atebrin proved as crucial as manpower in the battle for New Guinea. And in the light of a recent report from the World Health Organisation things are far from improving: the number of cases throughout the world reported has doubled in the last five years.

For his work in bringing Australia into an advanced stage of malaria research, Dr Ray received a unique token of esteem. He is both the only civilian and the only non-Australian to have been awarded the Harkness Medal, which is given to those who have done most to improve health in the Army. It usually goes to a member of the Army Medical Corps.

Dr Ray, who graduated from Patna University in 1938, has specialised in malaria research, control and eradication for almost his whole professional career. After malaria control work with the British Army during the second world war, he obtained the certificate of the Malaria Institute of India in 1945. Later he went to the Institute of Health in Bethesda, Maryland, USA, and the London School of Tropical Medicine and Hygiene. A World Health Organisation fellowship to study malaria eradication programs took him to Sri Lanka, Colombia, Jamaica, Mexico, Venezuela in the late 1950s. He was in charge of teacher training at the Malaria Institute of India from 1951 to 1961 and Dean of the International Malaria Eradication Training Centre in Manila from 1967 to 1970. He served on malaria advisory committees for WHO and the Pan American Health Conference and was with WHO independent assessing teams in Sri Lanka, Greece, Lebanon, Syria, the British Solomon Islands and other countries. In 1970 he became senior regional area officer at WHO's western Pacific office in Manila and was in that post until he came to Australia in 1973.

Dr Ray's main accomplishment in setting Australia on the international path of malaria research was to establish a strain of malaria in laboratory mice which can be used as a model in investigating the disease in humans. It is a mouse malaria which does not infect man.

Australia's concern about malaria has more intimate origins than the exotic problem it poses outside the country. While jet airliners can bring malaria cases to any part of the world, the disease is a menace only in those places where it can spread. Australia is one of those places, having the mosquito species which transmit the malaria parasite from the blood of one person to that of another. Malaria used to be endemic in the northern part of the continent and the mosquito vectors are still there—and apparently in pockets much further south.

The malaria receptive area of Australia, infested with mosquitoes which spread the disease, is defined as that part to the north of nineteen degrees latitude, above a line running just north of Townsville to just south of Broome. Yet there are reports of malaria being spread far south of the line at Roma in Queensland and even around Melbourne. The mosquito, *Anopheles annulipes*, which is common throughout Australia, is believed to have been responsible for some of the cases. As it prefers to feed on rabbits and cattle, however, it is not considered capable of establishing a permanent pool of malaria infection.

Each year about one and half million people arrive in Australia from overseas, and as Professor R. H. Black of the School of Public Health and Tropical Medicine has pointed out, more than two hundred thousand of them have recently come from malarious countries. So there is ample opportunity for the malaria parasite to gain entry. Indeed, more than two hundred and fifty cases of malaria were imported into Australia in 1976. The real danger arises when these infected travellers go to parts of the malaria receptive area, such as Darwin, where transmission can occur.

Malaria brought into the country by a traveller is known as an 'imported case'. People to whom the infection is spread by mosquitoes from an imported case are known as 'introduced' cases. When an introduced case gives rise to further infection, the disease is on its way to becoming established and the cases are termed 'indigenous'. Australia's last indigenous case was in 1962. An alert can be sounded earlier than that, however, as happened in February 1977, when three introduced cases were reported in Bamaga at the tip of the Cape York Peninsula. Within hours Captain Tony Sweeney, chief entomologist at the Malaria Research Unit, was on his way north to join investigation teams from the Federal and Queensland Health Departments.

The cause of the outbreak, the person who imported the infection into Australia, was believed to be someone on a lugger which had been tied to a wharf at Bamaga some weeks earlier. The chain of Torres Strait islands stretching between Australia and New Guinea is part of the malaria receptive area, and luggers sailing these waters may at any time help the disease across.

Captain Sweeney was interested in the mosquito vectors which had spread the disease from the unknown importer to the three Bamaga residents. He searched the pools and swamps close to the wharf at Red Island Point and around the homes of the introduced cases. He found, if not the culprits, certainly strong suspects—mosquitoes of the *Anopheles farauti* species, the major vector of malaria in the south-west Pacific region. To have proved them guilty of spreading the infection, he would have had to find the malaria parasite inside their bodies. This he failed to do, although he dissected many of them. The odds against finding a mosquito which had bitten the imported case and then one or all of the introduced cases, must have been enormous. A female mosquito may range a kilometre or more in quest of a blood meal. Only the females suck blood, which is necessary to their reproductive function.

Since Dr Ray's return to India last year, command of the unit has passed to an Australian doctor, Major David Parkinson. Major Parkinson has brought eighteen years of practical experience of fighting malaria in New Guinea

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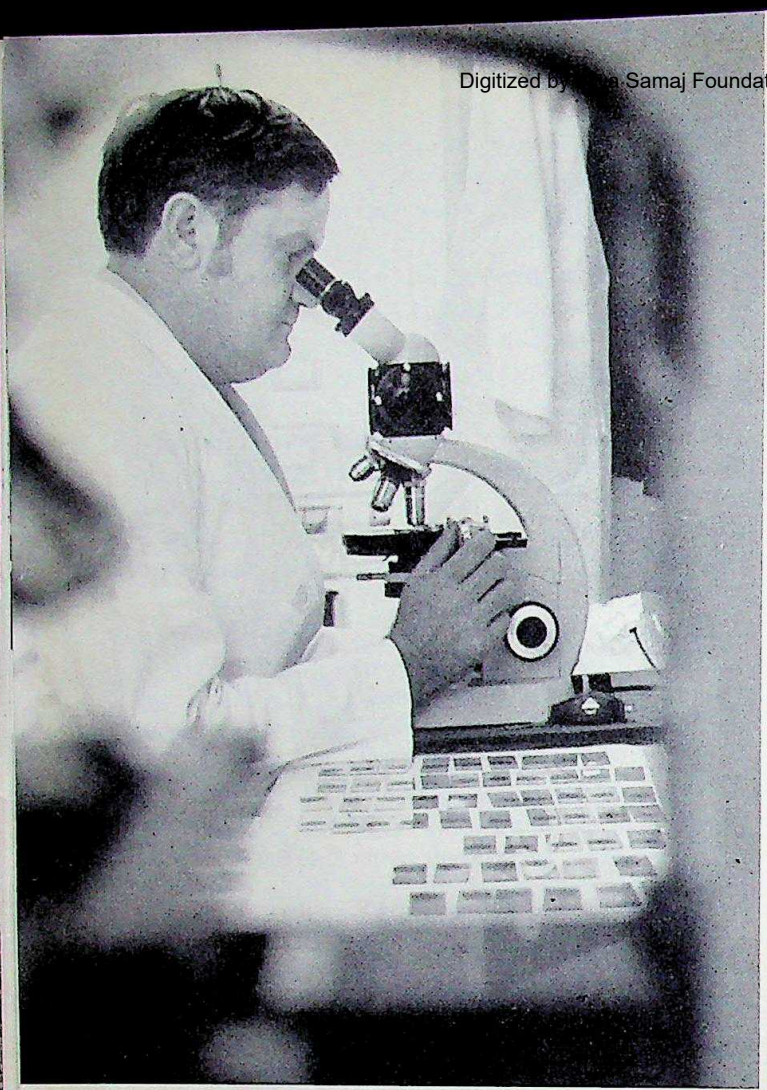

Blood films from malaria parasites under microscopic examination by Sgt. David Cowdrey, Laboratory Supervisor, who is shown at right with Dr. A. P. Ray, who played a major part in the development of what began as a small unit. (All these photos from Army Public Relations.)

to the task. Starting as a medical assistant in the New Guinea medical service, he later qualified in medicine and rose to be Assistant Director of Public Health.

The main functions for which Dr Ray prepared the unit include investigating the prevention of malaria by drugs and other means. The unit is also looking into the treatment of malaria patients both in the service and outside, with particular attention to those suffering from drug resistant strains of the parasite.

One of the most worrying features of the world wide malaria problem is that strains of parasite responsible for a highly dangerous form of the disease have acquired resistance to one of the staple anti-malaria drugs, chloroquine. The most important resistant strain is *Plasmodium falciparum.* This strain has occurred in New Guinea, the source of more than half the cases of malaria imported into Australia. It has been reported also in Indonesia, the Philippines, Malaysia, Thailand, Vietnam, Burma, Bangladesh, other parts of South-East Asia and in South America.

While nearly 90 per cent of the malaria cases imported into Australia are caused by the parasite *Plasmodium viva,* an increasing number is from *Plasmodium falciparum.* The risk that some of these infections will be chloroquine resistant imposes three obligations, according to Professor Black: patients must be observed carefully and if their condition is serious or a relapse occurs should be treated with alternative drugs, such as quinine or Fansidar; all arrivals from Papua New Guinea should be treated with Fansidar followed by a course of chloroquine and primaquine as at present; and Australians intending to visit rural areas of New Guinea should seek advice about protection against chloroquine resistant falciparum malaria.

Falciparum was not distinguished from vivax malaria until after the second world war. The parasites of both types travel to the liver, from which they break out to invade the blood cells, producing the illness of malaria. *Falciparum* parasites do not return to the liver, but some of the vivax parasites do. Here they set up a reservoir of infection which gives rise to future attacks of illness.

The second world war drug Atebrin killed both types of parasite in the blood, but had no effect on either in the liver. Not uncommonly, after a person stopped taking Atebrin, vivax malaria broke out of the liver to lay him low. A modern drug, Primaquin, kills vivax in the liver, preventing a resurgence of the illness after people stop taking their prophylactic pills. But it is too toxic to be used against the acute illness in the blood.

Resistance has developed to a number of newer drugs such as Chloroquine and Dapsone. In addition Dapso

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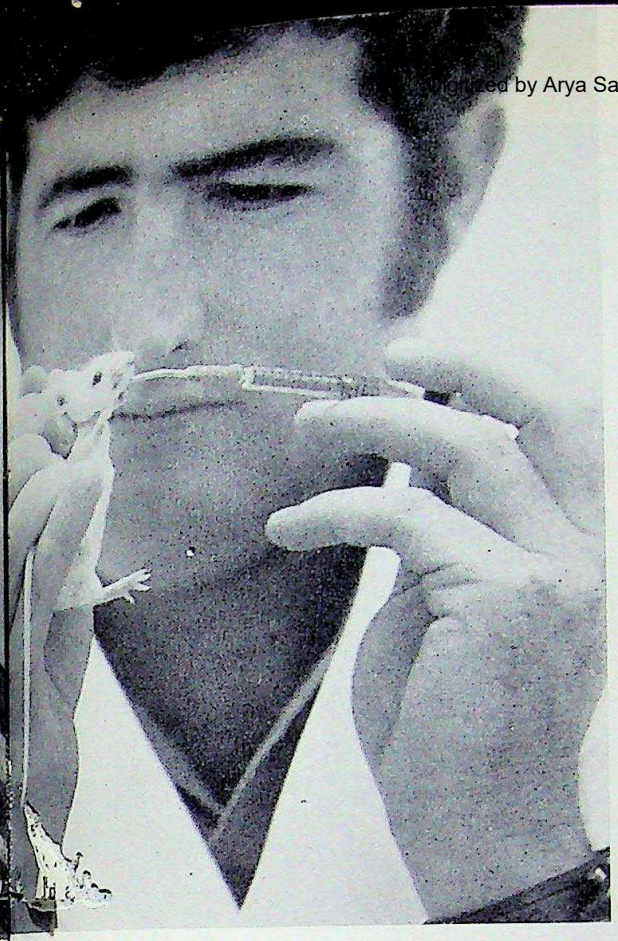

A mouse infected with a malaria parasite being fed Fansidar, a drug used in the treatment of chloroquine-resistant malaria, in tests carried out by L/Cp. Alan Fraser; Corporal Garth McBain 'feeding' mosquitoes so that they can reproduce.

has been shown to be toxic in high doses. But Dapsone combined with another improved drug, Paludrin, augment each other's effects, allowing the dose to be lowered. The combination was used successfully in the Vietnam war. Chloroquine can still be safely used by temporary visitors to Chloroquine resistant areas, provided they stick to the towns, where exposure to infected mosquitoes is minimal. Anyone going deeper into Chloroquine resistant country can obtain effective protection from a new combination of Pyrimethamine and Dapsone, sold as Maloprim. Federal Health Department consent is needed to prescribe it.

The mouse malaria established at the research unit by Dr Ray is proving useful in testing a variety of malaria drugs. Resistance to Chloroquine, Paludrin and Pyrimethamine has been artificially created in the strain so that drug combinations designed to break the resistance can be tested against it. From mice the research will proceed to owl monkeys, which the unit intends to acquire. The same drugs will be tested again in the monkeys, which will be infected with falciparum malaria. At the same time the unit is developing a technique for cultivating malaria parasites to provide a test tube method of evaluating drugs and other possible methods of killing the organisms.

Four types of Anopheles mosquito are being bred at the unit. Captain Sweeney collected two lots of *Anopheles farauti* at Bamaga and Port Moresby last year, then mated members of one colony with those of the other. The offspring were sterile, proving that the colonies were distinct types of *farauti,* a species once believed to be uniform. Further study is revealing possible significant divisions in other malarial species.

Besides trying to defeat the malaria parasite, the unit is investigating means of controlling malaria mosquitoes. As mosquitoes in many countries become increasingly resistant to insecticides commonly in use, alternative, biological means of control are being studied. Not far away from the unit, in another part of Sydney, Captain Sweeney discovered a fungus, culicinomyces, which has proved toxic to mosquito larvae. Promising though this find is, it is far from certain that the fungus will have the same effect in hotter, northern parts of Australia, where there is much more immediate danger of malaria being transmitted.

At present Captain Sweeney is trying to breed strains of the fungus which will withstand tropical temperatures. The neatest solution, after all, would be to settle the war against the disease in the swamps instead of in human blood.

—

THE AUTHOR: *Shaun McIlwraith is a well-known Australian journalist.*

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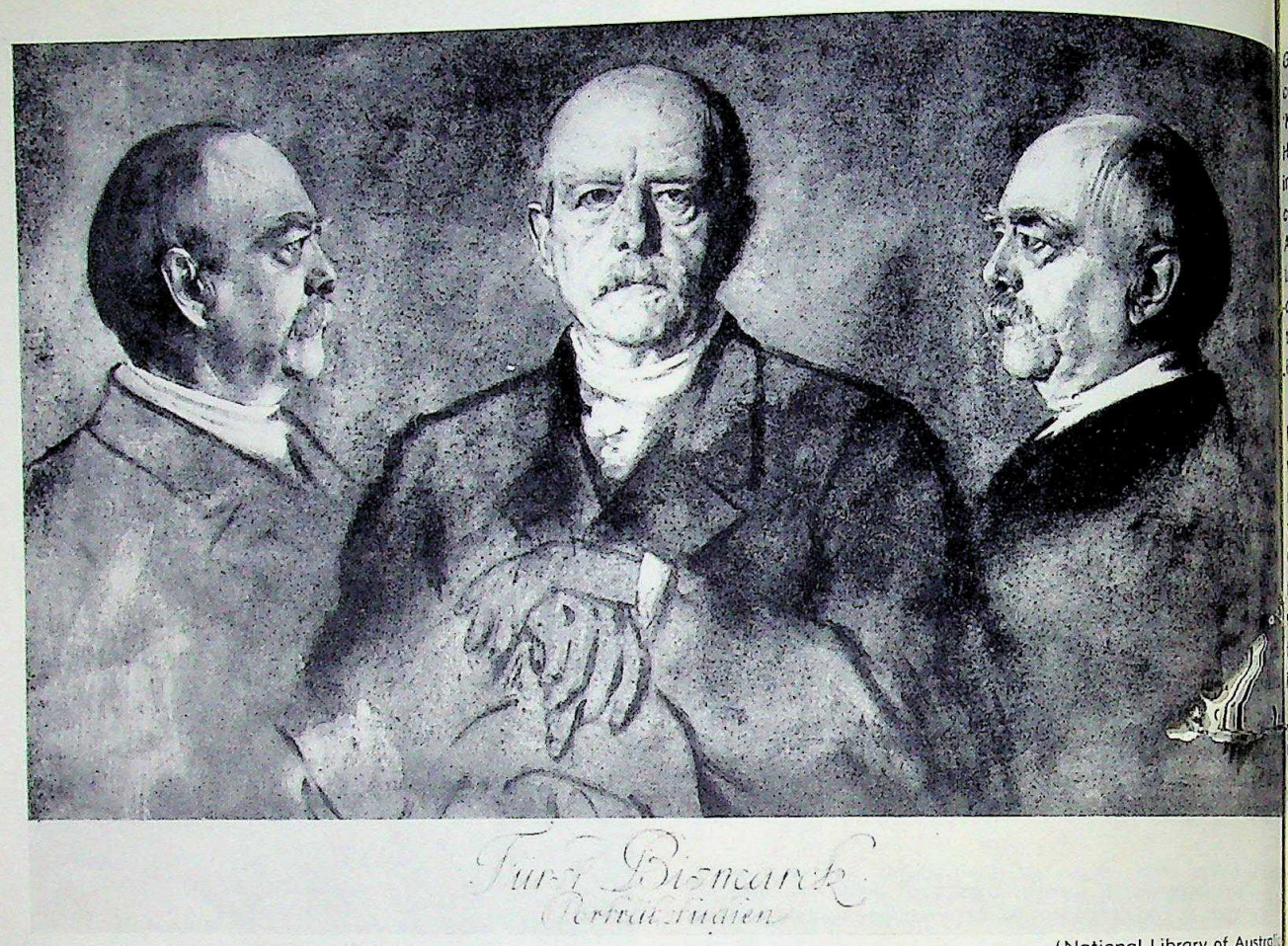

(National Library of Australi

Three studies of Prince von Bismarck, German statesman, author of the call for the Drang nach Osten*—the drive to the East, wh was to break British hegemony in the Indian sub-continent. During his lifetime, German expansion took place much further to t east—in the Pacific, as well as in Africa, as Germany joined the race for colonies.*

EAST AND FURTHER EAST

Stewart Firt

SHEER illusion can play a greater part in human affairs than is generally acknowledged, and no more so than when men act in the hope of making easy money. The colonial history of the Pacific Islands and the Far East provide many examples of this from the South Sea Bubble of the 1720s to the New Guinea gold-rush two centuries later. Less familiar cases of men deluded by the expectation of quick profits come from the brief history of Germany's Pacific and Chinese colonies, German New Guinea, German Samoa and Kiautschou.

German marines raised the black-white-red flag of the Second Reich over north-east New Guinea and the Bismarck Archipelago in 1884, over Kiautschou in Shantung province in 1898 and over Western Samoa in 1900. Australian, Japanese and New Zealand soldiers lowered it again in 19[illegible]. In the meantime many Germans who had greeted annexation as the key to instant commercial success discovered the gap between daydreams and reality.

Apart from the Iron Chancellor Otto von Bismarck, wh made the decision to annex New Guinea, no man ha more to do with the creation of the German possessio in Melanesia than a wealthy Berlin banker called Adolp von Hansemann. It was Hansemann who first suggeste the idea of a German colony in north-west New Guin to Bismarck in 1881, and it was he who revived the schem in 1884 when the German government was ready to ba up talk of colonies with action.

Hansemann's enthusiasm for colonies suited Bismar perfectly: here was a businessman eager to form a 'Ne Guinea Company' to exploit the supposed riches of th island and willing to administer the new possession at th company's expense. All the German government nee provide would be the occasional naval corvette to kee the islanders in 'order'.

For his part, Hansemann envisaged a stream of wea from his new El Dorado and set about planning the ne

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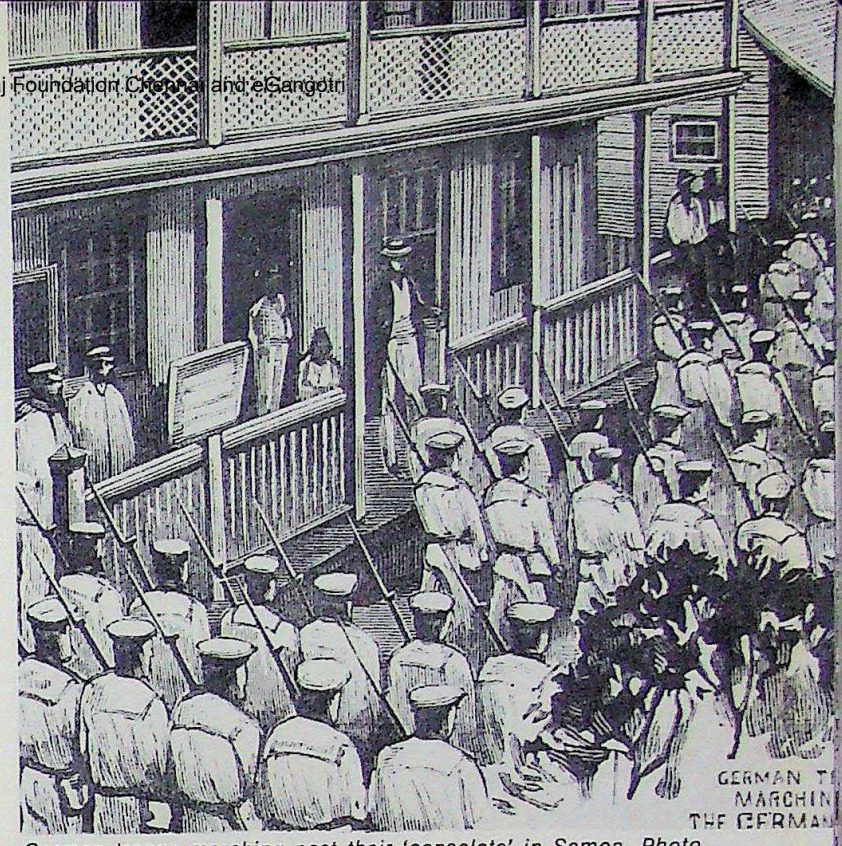
German cities which he expected to spring up on the coast of north-east mainland New Guinea, now renamed 'Kaiser Wilhelm's Land'. Sanguine soul that he was, Hansemann was convinced that thousands of German immigrants from the Fatherland and from the Australian colonies would rush to be on Germany's first Pacific soil. As the holder of sole rights to New Guinea's 'unowned land' under the terms of the New Guinea Company's 1885 charter from the German government, Hansemann would then be in the blissful position of being able to sell the land of New Guinea to settlers at immense profit.

Alas for Hansemann, the man who spent every morning before he went to his bank governing New Guinea, sank vast sums from his personal fortune into the venture and never bothered to visit the island! Hardly a single migrant went to Kaiser Wilhelm's Land. By 1889 over four million German marks had been spent for nothing. Hansemann turned to tobacco and cacao planting as his salvation, created new companies, imported thousands of labourers from Sumatra, Singapore and the New Guinea islands and hired plantation experts from the Dutch East Indies.

The dream of Kaiser Wilhelm's Land became a nightmare. Colonists had to flee the capital of Finschhafen in 1891 as one after another they succumbed to malaria. Plantation labourers died in thousands from dysentery, influenza and malaria. German overseers, frail from repeated malarial attacks, became known on the ships which bore them home to Europe as 'New Guinea corpses'. Crops failed. The New Guinea Company was saved from insolvency only by the convenient generosity of the German government, which took over the administration of German New Guinea in 1899 and paid the Company four million marks.

Hansemann, a tireless promulgator of petty regulations and giver of orders to his underlings in Kaiser Wilhelm's Land, took everything into account in planning his tropical paradise except New Guinea and the New Guineans. He over-estimated the attractions of the place to prospective migrants, under-estimated the effects of malaria and assumed that the New Guinean people would be happy to join in his great work of colonisation by signing on as labourers. Very few New Guineans from the mainland in fact worked for the company, preferring to trade their artefacts and fresh food for the Germans' cloth and axes and, for the rest, stick to a life based on subsistence agriculture.

The plantation enterprises foundered on Hansemann's ignorance. Expensive machinery could not compensate for the fact that his company was growing tobacco and cacao, crops unsuited to the soils and climate of the New Guinea coast, instead of that staple of the Pacific islands, copra. With much government help Hansemann's New Guinea Company survived long enough to pay its first dividend in 1913. The Australians came to Madang in 1914, the New Guinea Company was expropriated after the First World War and Kaiser Wilhelm's Land, the El Dorado which became a white elephant, was forgotten.



German troops marching past their 'consolate' in Samoa. Photo from Illustrated Australian News, *1887, courtesy National Library of Australia.)*

In German Samoa the daydreamer was an officer in the 43rd Field Artillery Regiment of the German Army, Lieutenant Richard Deeken, who visited Samoa at the age of twenty-seven in 1901. Deeken was entranced by what he saw, not least by the beautiful Samoan women, whose photographs adorned a book about Samoa which he published on his return to Germany. A man of modest means, he assured his readers, would not only be greeted in the new German colony by smiling girls but he would be able to afford to establish a cacao plantation and live the life of the planter in the tropics. The vision was enticing, especially for a number of Deeken's fellow army officers facing another winter in the garrison at Potsdam or military exercises in the cold of East Prussia.

By June 1902 every vessel reaching Samoa from Germany brought eager planters-to-be who had left the army or some other secure occupation to make their fortunes from cacao. Deeken himself emigrated in that year as manager of his own German Samoa Company and became the spokesman for the new settlers as they encountered the harsh reality of cacao growing in the central Pacific. Like Hansemann in New Guinea, the new settlers assumed in advance that the original inhabitants of the Pacific islands had nothing else to do but work for the European; and like Hansemann they were wrong.

Except when forced to do so by drought or war, the Samoans never worked for Europeans. The Samoans' gardens produced plentiful amounts of coconut, breadfruit, bananas, oranges and taro; the sea gave them fish in abundance; and they were successful cash-croppers, sellings thousands of tonnes of copra each year to the trading companies. To work for Europeans, therefore,

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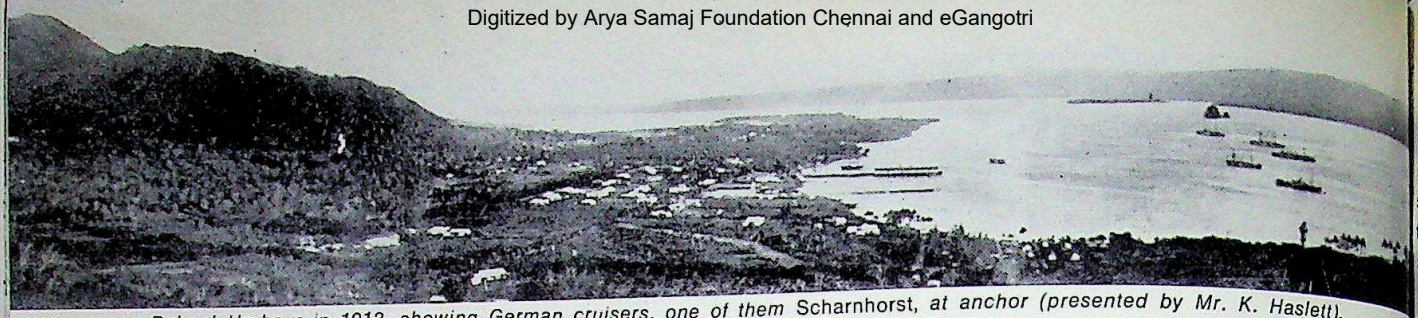

Rabaul Harbour in 1913, showing German cruisers, one of them Scharnhorst, *at anchor (presented by Mr. K. Haslett).*

A German expedition in the Bismarck Archipelago, and United States, British and German ships in harbour at Apia, Samoa, 1699
(Photos courtesy National Library of Australia.)

they demanded wages which few Europeans could afford to pay.

The planters had no one to clear the land, no one to plant the cacao. They were outraged at this reversal of expectations and complained that the Samoans were 'spoilt' and should be forced to work for the white man; failing that, the colonial government should help them get labourers from elsewhere, German New Guinea for example or the China coast. Why, they asked, should the big Hamburg company whose copra plantations covered thousands of hectares in Samoa, be permited to employ New Guineans when the same permission was withheld from the new German settlers? Why should they, the men whose smallholdings would transform Samoa into a little Germany, have to do without cheap labour?

Rhetoric and practice, the cacao planters soon discovered, were two different things in the German colonial empire. Talk of peopling Germany's colonies with peasant proprietors, of transplanting German culture to the South Seas and assisting pioneers of small settlement was the stuff of after-dinner speeches at meetings of the German Colonial Society, but it was little more than that. The Governor of German Samoa, Wilhelm Solf, had no desire to add to the complications of his job by encouraging German settlers and was determined to keep Samoan village culture intact. He knew that Samoans would never submit to forced labour; they might even stage a rebellion which would tarnish his reputation. As for bringing New Guineans to work on cacao farms in Samoa, the ne settlers learnt that theirs was not the only voice hear on the issue: German planters in New Guinea wante labourers too and detested the idea of losing them another colony.

Anticipations that they would one day survey the tropical domains from a plantation verandah while watching Samoan girls dance the *siva* rapidly diminished in th minds of the cacao planters. Instead of lolling in a cha they found themselves felling and grubbing trees, diggin soil and erecting huts. Deeken, the man who had lure them to Samoa, now held out renewed hope by bringing a shipload of Chinese contract labourers from Swatow 1903. They were the first of three thousand eight hundre Chinese who were to work for the Germans in Samo before the First World War but they did not make the planters' dreams come true.

The Chinese, while toiling hard for their employers objected to ill-treatment. Some went on strike, other attacked overseers with knives, most objected to bein flogged. And when news of their working condition reached China the Chinese authorities despatched invest gators to report on the plight of their countrymen. As consequence, Germany had the utmost difficulty in obtai ing China's permission to continue recruiting labourer and was forced to agree to concessions in the manner their employment. Planters had to pay higher wages an give the Chinese more holidays.

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Samoan cacao was a failure. Deeken's company lost a quarter of a million marks on cacao in 1913 and the smaller planters fared no better. Men of moderate substance were reduced to penury as traders and many found refuge in the hotel bars of Apia Bay. Insufficient and expensive labourers, plant diseases, inexperience, unsympathetic governors and the simple fact that plantations were long-term, not short-term investments combined to defeat the settlers and to make Richard Deeken's promises of an easy life in the sun seem like a cruel taunt.

Kiautschou was supposed to be Germany's model colony. Unlike the African and Pacific possessions it was administered by the Imperial Navy, which, with the active backing of Kaiser Wilhelm II, had agitated for territory in China in the first place. The Navy argued that Shantung province, with its rich coalfields and population of thirty million, would be a magnet for German investment in mining, railways and the import-export trade.

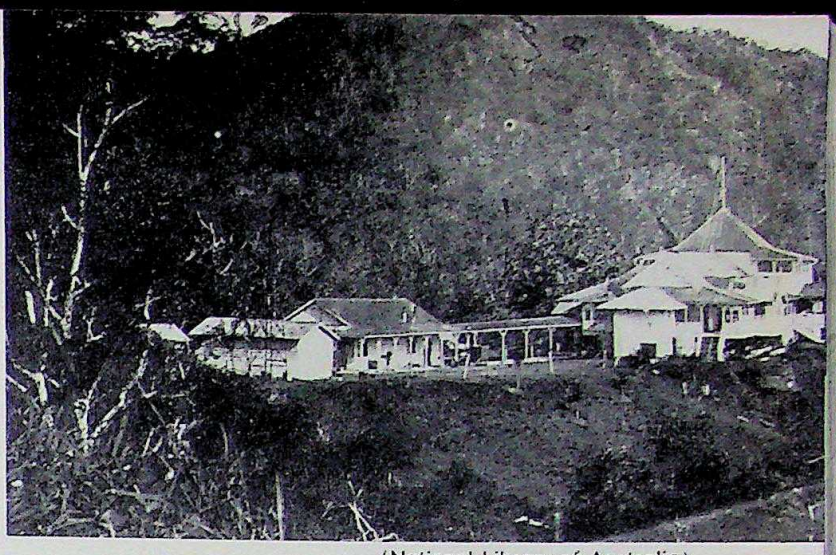
Germany spent lavishly on developing its Chinese colony. At Tsingtao expensive modern dock facilities were installed and a modern town laid out. Tsingtao certainly became a centre of commerce but a mere eight per cent of its trade was in German hands by 1913 and what little German industry was attracted to Shantung did not prosper. The Schantung Bergbau Gesellschaft mined millions of tonnes of Chinese coal but never made money and was forced to close in 1913; a German silk-processing company invested heavily, lost heavily and abandoned operations; and even the German railway company did not exploit its concession to striking advantage.[1]

In China as in New Guinea and Samoa the age of the scramble for colonies produced a feverish longing among some Germans not to miss out. After all, was not the greatest Power in the world, Britain, also ruler of the largest colonial empire? The connection between colonies and profit appeared self-evident, but it was more tenuous than the enthusiasts and visionaries realised. China and the tropical world was no *tabula rasa* on which Western-style economic activity could be imprinted at will, nor were the colonised peoples waiting in a queue to help Europeans in the task of colonisation. Europeans who assumed otherwise, who believed that European man must always triumph, were destined to be disappointed.

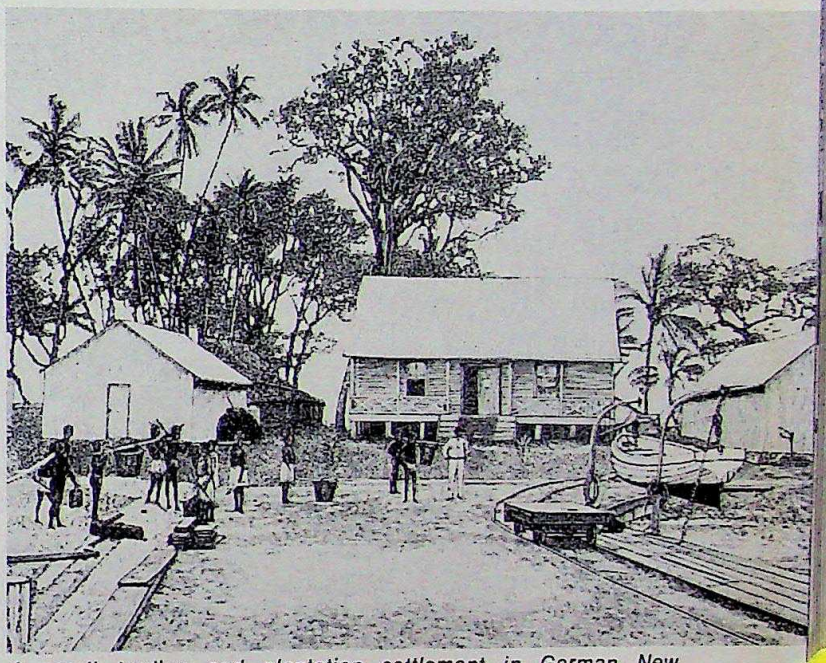
[1] John E. Schrecker, 'Kiautschou and the Problems of German Colonialism' in John A. Moses and Paul M. Kennedy, *Germany in the Pacific and Far East 1870-1914* (University of Queensland Press, 1977), 185-208.

The author of the article is a Lecturer in Politics at Macquarie University, New South Wales.

Editor's Note: *Germany in the Pacific and Far East 1870-1914* (ISBN 0 7022 1330 6) by John A. Moses and Paul M. Kennedy, was recently published by the University of Queensland Press, and dedicated to J. W. Davidson, the first Professor of Pacific History at the Australian National University, widely regarded as one of the foremost in promoting the study of the Pacific in this country.



(National Library of Australia)
Government House at Rabaul, New Britain, in 1914.



A small trading and plantation settlement in German New Guinea, sketched in 1891 by Hugo Zoller of Stuttgart, and a photograph of Apia decorated for the Kaiser's birthday from The Encyclopaedia of Fiji, Samoa, Tonga, Tahiti and the Cook Islands, *Sydney, 1907. (Illustrations courtesy National Library of Australia.)*

Street of Apia on Kaiser's Birthday.

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The artist, Ryohei Tanaka. (All photos by Masahiko Ōnishi.)

MODERN MICROCOSM

Peter W. Hillebran

THROUGHOUT their history the Japanese have shown a marked ability to create art-forms from almost every aspect of their lives: their diverse religions of Shinto and Buddhism have produced gardens of exquisite and formal design, the aesthetically rich simplicity of the tea-ceremony, the visual beauty of the samurai swords and swordsmanship, flower-arrangement, ceramics a lacquer-ware, to mention a few. Deriving some of the art forms from other cultures, the Japanese have imbu them with a new vitality which uniquely expresses th mentality. Thus masters of these various arts have aris and they, in turn, have created their own schools.

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The older art forms came from the Chinese mainland —pottery, the use of metal, techniques and styles of sculpture, music, architecture, painting and calligraphy. With the coming of the Europeans in the sixteenth century, new forms and techniques were added to the culture to be subjected to the same metamorphosis. Among these latter introductions was the art of etching. In Europe this medium dated from 1513 and, after the achievements of Dürer, reached its zenith in the etchings of Rembrandt in the middle of the seventeenth century.

The etchings of Ryohei Tanaka have become widely known both in his own country and abroad. He was born in 1933 and at the age of thirteen, as a schoolboy at Takatsuki High School, he attended the International Etching Exhibition held in Japan. The sensitivity and beauty of the work he saw captivated him. This turned him from his childhood hobby of painting to developing for himself the techniques of the art-form which only a few years ago was to become for him a profession. He wished to create what was for him fascinating: at first his work studies of his grandfather's old country farm house with its thatch roof of clean sharp lines.

For his etching Tanaka uses a copper plate, the surface of which has previously been covered with pine-wax in order to provide a resinous ground impervious to acid or other mordants. With an etching needle he cuts into the surface a picture, using lines, points and hatching. When the drawing is complete the plate is submerged in an acid bath (generally diluted hydrochloric acid mixed with chlorate of potash or dilute nitric acid); by carefully timing the period of the immersion the depth of the lines and points can be decided at will. Deeper biting can be obtained in any area by stopping-out the other areas of the plate with varnish and again immersing the plate in acid.

This basic method is further elaborated by using such techniques as soft-ground etching. For this the artist draws his picture on a sheet of paper, usually grained or textured, which is placed over a ground. By the application of differing pressures to the point of the drawing instrument, a pencil or pen for example, more or less wax adheres to the under surface of the paper. When the paper is removed from the ground it lifts with it the wax where the lines and points have been drawn. The effect of this, after the plate has been submerged in the acid, is to give a soft, grainy quality to the print, and to produce work imitative of chalk or pencil drawings.

Tanaka also uses the technique of aquatint, which derives its name from the Latin, *aqua fortis* (nitric acid). When the acid penetrates the ground, which is porous, thousands of small dots are formed on the surface of the plate. Pure white lines, dots and areas can be stopped-out prior to immersion in the acid, the tonal gradations of these small dots being affected in degree by the biting and stopping-out desired. Sometimes Tanaka varies this process by using a press; sometimes he roughens the surface of the plate with sugar or sandpaper. His work

A flower-study and Wall 76.

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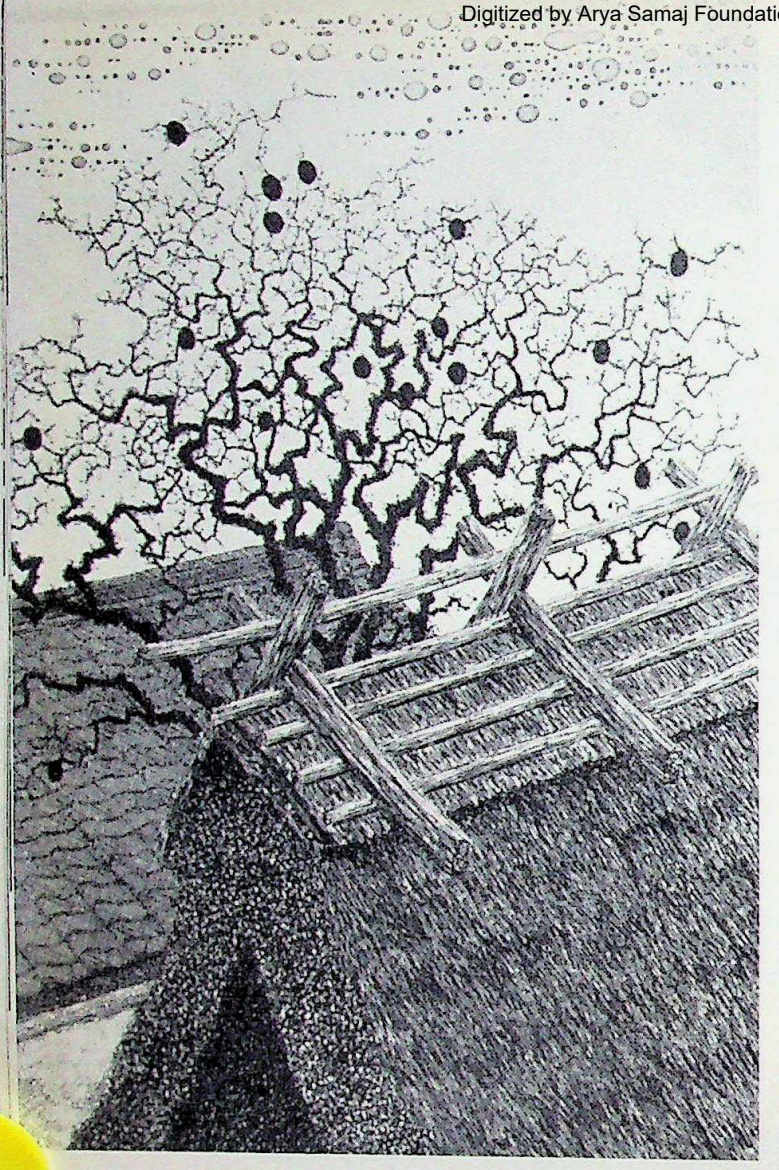
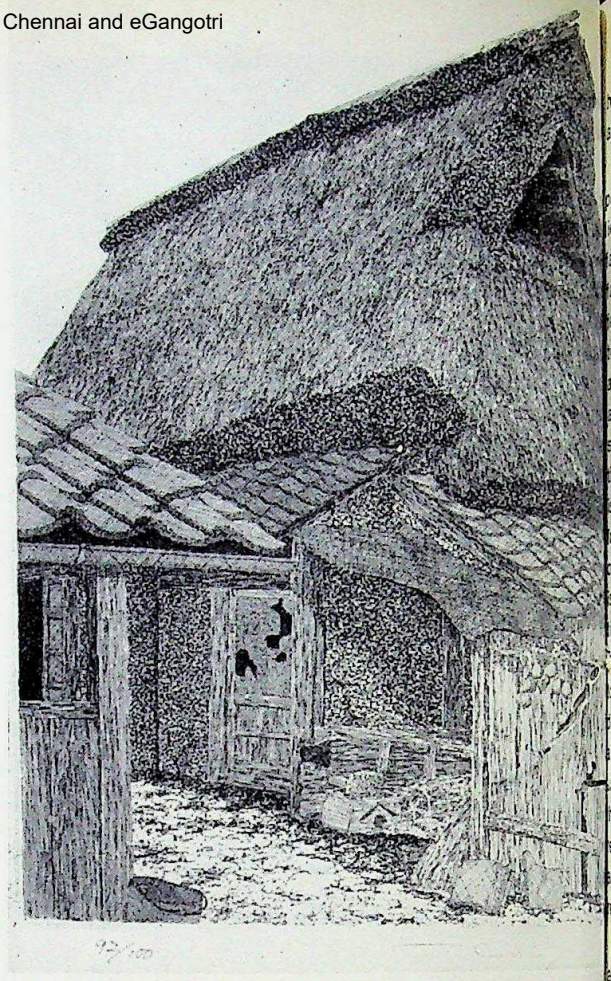
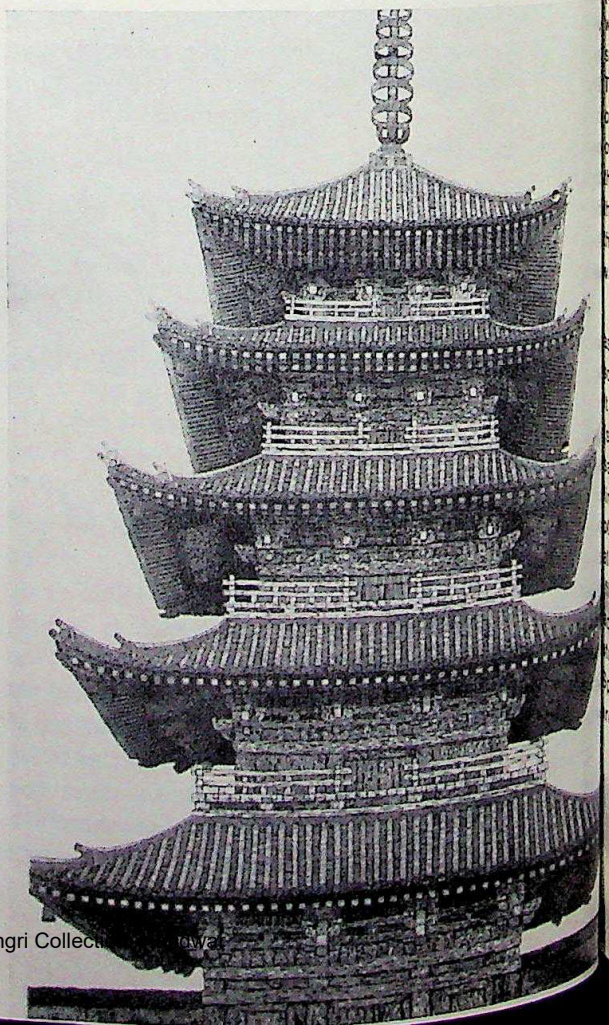


Persimmon and Roofs *and* Gathering Roofs *(both etching and aquatint).*



Thatched Roof No. 29 *(etching and aquatint) and* Pagoda, T
Temple.



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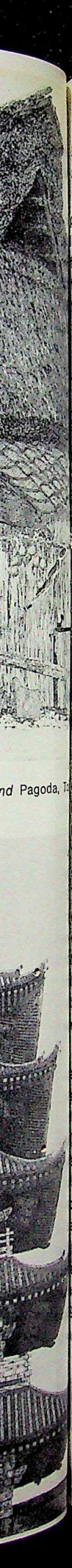

nd Pagoda, T

has the refined and controlled breadth which one readily associates with the art of etching.

Tanaka's subjects are drawn from Japan, both past and present, but his greatest interest and field of expression lie in Japan's traditional domestic architecture: an old farm-house viewed from an elevation so as to include a shallow field of stones and clods lying beyond. In the foreground a *shibukaki* (persimmon tree) growing between two buildings, the whole capturing, as does all his work, a warmth, intimacy and sensitivity to his country's past and the present beauty of its nature. The tree, which stands between the house and a *kura* (storehouse) of thick mud walls, white plastered and roofed with tiles, is highly valued in Japan because of the beauty of its fruit, which, when the tree has defoliated at the end of winter, turns a rich golden colour. The farm house is simply a study of a homestead with a thatched roof, tiled eaves and two out-sheds. A sooty triangular vent at the gable-end which permits any smoke from the kitchen to escape, punctured rice-paper in the upper part of the door, and the wooden wall panels fallen into decay give a feeling of age and decrepitude. The axe, rice-pounder and the *daikon* (giant radishes) hanging out to dry under the eaves, as well as Tanaka's subtle and sensitive rendering of the buildings and objects, obtained by the application of different etching techniques, convey a rustic beauty.

In the composite study of the roofs of farm-houses against a background of mist, the artist is particularly concerned with the roof fittings and the thatch — the bamboo ridge-pole (a symbol of affluence), the *chigi* (crossed wooden supports) which hold the former as well as the bark coping in place. Fittings vary in construction and stylish treatment from district to district. The five-storied pagoda adds grandeur to the qualities of warmth and intimacy. The structure appears to stand over the viewer, the concave weight of the tiles vigorously thrust out on multiple systems of rafters and brackets, the whole rising to a finial of bronze rings representing the heavenly worlds of Buddhism and surmounted by a water-flame (missing from the etching).

The pagoda itself is usually located in a temple complex as a religious teaching symbol. It may contain sacred sculpture; often the inside walls are painted with murals. It is also used as a reliquary for the enshrining of *shari* (small pebbles of bone) found after the cremation of a Buddha's body. The thistle is a superb example of aquatint, the etching having been used for the tufted head. This plant, usually associated in the West with Scotland, is also grown in Japan and is frequently used in *ikebana* (flower-arrangement). This medium and its technique account for the very ethereal effect of light in this delicate study. The *Higanbana* (Autumn Equinox flower) or Scarlet Spider Lily (Lycoris radiata) shows in its placing of the areas of black and grey Tanaka's feeling for tonal values.

Thistle *(etching and aquatint).*

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...e flower, which grows on a tall stem without leaves, ...found along the edges of rice-fields at the time of the ...utumn Equinox when the rice has ripened. Here it is ...aced against a background of abrupt and heavily ...ooded mountains typical of the Japanese countryside, ...hilst at the bottom is a village of houses from among ...hich a temple roof rises. Another botanical study is that ...a pollarded poplar tree. The realistic shapes of its ...anches make a fascinating abstract pattern.

The etching of a Shinto shrine is a fine example of ...anaka's sensitive expression of detail. The eye is led ...y the foreground path to a mysterious entrance guarded ...y two stone lanterns and a sacred gateway (*torii*) upon ...hich has been fixed a framed wooden tablet bearing the ...me of the shrine. The detail in the work is minute and ...eticulous, each leaf and stone having been separately ...graved, and yet the general effect is stylised.

...Tanaka has any philosophy of art it is his simple belief ...the value of traditional Japanese architecture because of ...s ability to evoke nostalgia. It is this quality which pro-...ides for him the pleasure of creating, accounts for his ...ck of interest in the works of others, preserves his ...iginality and is the reason that inspiration comes easily. ...hilst he creates for his own personal satisfaction, Tanaka ...opes that those who appreciate his work will experience ...is same wistful remembrance of the past which still ...ngers on in the Japanese countryside.

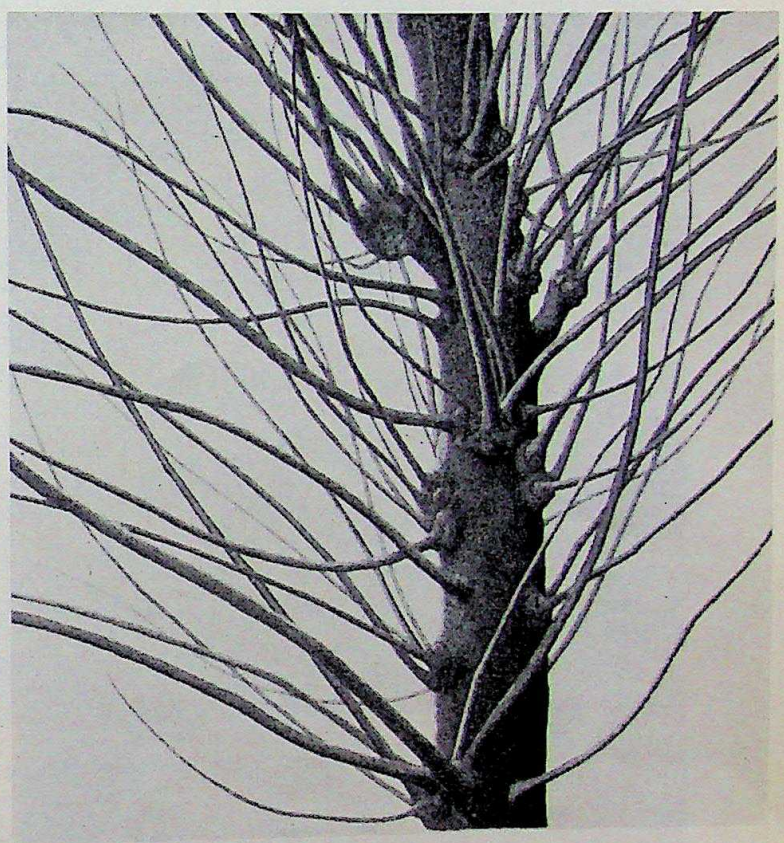
...In the sprawling dormitory town of Takatsuki, between ...e graceful old capital, Kyoto, and the hurly-burly business ...ntre of Osaka, is his home and studio. In the evenings, ...hen the excited voices of his children have been stilled ...y sleep and his old and rambling house has fallen to ...iet, he examines his sketch-books and photographs or ...egins to work from memory. The music of Mozart and ...ach play in the background. To the accompaniment of ...opular music, loud and boisterous, the day is spent ...ocessing copper plates and making the prints which ...e done on imported French paper.

...Tanaka has never been abroad and has little interest in ...avel. His artistic milieu is a sensitive one, somewhat ...moved from the harsh realities of the modern Japan he ...oves in with great energy, excitement and explosive ...appiness.

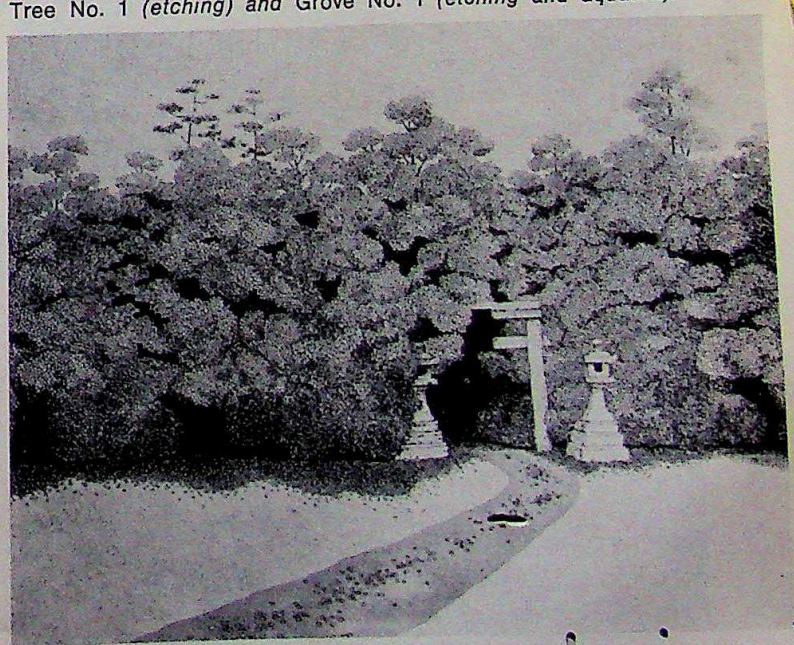
...In 1966 he began to exhibit his work and his first show ...as at the annual exhibition of the Japan Print Association. ...ater in the same year he presented his own exhibtion ...t the Yamada Gallery in Kyoto, this being followed the ...ext year with his first international exhibition in the ...ori Galleries in Chicago. Following the success of these ...hibitions, he has exhibited widely both in Japan and ...broad. In 1977 he illustrated two books which were ...blished in the same year—*A Fool's Life* by Akutagawa ...yunosuke, published in New Work, and *Hearth*, a book of ...ems by the American and poet Cid Corman. His work ...as already found a place in such illustrious collections as those of the Fogg Museum, the Aschenbach Foundation Collection, the Boston Museum of Fine Arts, and the International Graphic Art Society in New York. In Japan his recent work can be found at the Yamada Gallery in Kyoto's Shinmonzen Street, famous for its galleries and antique shops.

Tanaka signs his work with his first name, Ryohei — the name which his intimate friends call him by. His work has all the intimacy of his signature.

The Reverend Peter Hillebrand was formerly a master at Geelong Grammar School in Victoria and is presently lecturing in English at Doshisha and Fitsumeikan Universities.



Tree No. 1 *(etching)* and Grove No. 1 *(etching and aquatint)*.



Left: Shady Village *(etching and aquatint)*.

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The Citadel at Moenjodaro, with the stupa in the background.

CITY PLANNING, B. C.

Peter Bellwo

FROM the air, the waters of the majestic Indus river flow as a ribbon of silver through a broad patchwork of green cultivation. Beyond the edge of the valley, where irrigation ceases, the forbidding brown wastes of Baluchistan and Sind spread away to the horizon. Like its cousins the Nile and Euphrates, the Indus once supplied the life-giving waters which supported a major civilisation of antiquity. However, unlike the civilisations of Egypt and Mesopotamia, that of the Indus died mysteriously after a single millennium of florescence. As the Hittites, Egyptians and the peoples of Babylonia forged new empires to the west, so the northern part of the Indian sub-continent became the domain of the newly-arrived speakers of the Indo-European languages ancestral to present-day Hindi and its relatives. The great ruined cities of Moenjodaro and Harappa were forgotten.

Between 2700 and 1700 B.C. the Indus civilisation, w
its cities of baked brick and its massive citadels, flo
ished on a par with the civilisation of the Sumeria
Its systems of drainage and sanitation were unparalle
anywhere in the world at this time, and so were
planned rectangular grids of streets found in the lar
cities. The powerful hand of centralised state governm
may be seen throughout, and this circumstance m
explain the sad paradox that, when compared to
legacy of the Sumerians and Old Kingdom Egyptia
this is a civilisation seemingly without life and art. Cl
bronze and stone figurines there are, but with a few
markable exceptions (such as a bronze figurine of a da
ing girl from Moenjodaro), they appear to most mod
observers to lack inspiration. Perhaps this reflects
deadening hand of omnipotent authority, and we m

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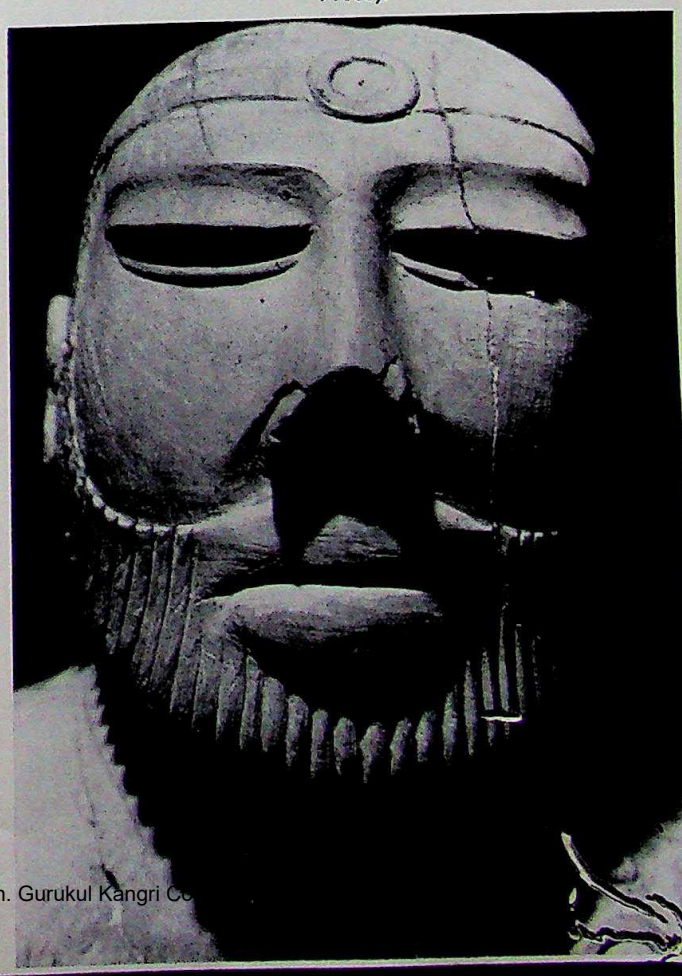
ther surmise that the eventual collapse of this authority as one reason for the inexorable decline of the civilisa- on itself. As to its rise, we can only surmise a successful cle of conquest by an elite group who, as we will see, ere most probably of local origin.

The civilisation of the Indus was the largest in geo- raphical terms ever to evolve in the Bronze Age, and s remains spread for over 1200 kilometres from the ulf of Cambay to the Upper Indus, and from the western oast of Baluchistan to Delhi. Most sites are now in akistan, but several major ones also lie in the Indian tates of Gujarat and Rajasthan. Prior to the 1920s the xistence of this cilivisation was unknown, and its dis- overy ranks as one of the major achievements of modern rchaeology. Here were no massive stone monuments r inscriptions to attract the explorers of the nineteeth entury; vistas of crumbling baked brick were all that uld meet a roving eye, and the small numbers of bjets d'art were small, buried, and only recoverable by cavation.

As known today, the Indus civilisation had at least ur major cities: Moenjodaro in Sind, Harappa in the unjab, Kalibangan in Rajasthan, and Lothal in Gujarat. pproximately one hundred and fifty smaller settlements e also known. The inhabitants of these settlements upported themselves by the irrigated cultivation of wheat, arley, peas, cotton, and rice (in the south), and by raising omestic animals. Because the Indus floods heavily in e summer, most cultivation probably took place in the inter when the waters were more manageable. Since the wer course of the Indus has only seventy-five millimetres f rain per year, cultivation by rainfall alone is most nlikely. The Indus also supported extensive gallery forests hich provided the essential fuel for brick-making.

Recent archaeological work allows one to dispute the ossibility that the Indus cities were simply colonies of e Sumerians or Egyptians. The civilisation has an un- eniable autochthonous stamp, and it now has well- ocumented local antecedents. Between 5000 and 3000 .C. small villages supported by irrigation or rainfall rming appeared throughout eastern Iran, Afghanistan nd Baluchistan. It is now clear that the original impetus r village life came from western Asia, where it began lmost ten thousand years ago. However, this was all ng before the Indus civilisation was even dreamt of, nd a direct spread of city life from Sumer to the Indus s unthinkable. By 3200 B.C. villages had been founded Amri and Kot Diji (near Moenjodaro) on the Indus elf, and by 2800 B.C. a thriving town inside an enclosure ell of two hundred and fifty metres by a hundred and enty metres, with streets, courtyard houses and factories r fine pottery and copper axes had been founded at Kali- ngan. This settlement has also preserved the remains of ploughed field, to my knowledge the earliest direct evi- ence for such a major development anywhere in the world. owever, archaeologists do not recognise these earliest ettlements as a part of the Indus civilisation proper, and

A terra-cotta mother goddess from Moenjodaro, and one of the city's most famous relics, probably representing a priest-king or deity, in stone (19 cm). (Photo: William Macquitty, Camera Press).



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the hallmarks of the latter — centralised planning and characteristic types of pottery — spread throughout the area soon after 2700 B.C. One of the few great civilisations of remote antiquity had arrived.

The major cities of the Indus, especially the four listed above, all present similar features of planning. To one side of the city, usually the west, lies a large rectangular citadel built up of bricks above the level of the plain. At Harappa the remains of massive brick walls and towers defending the edge of the citadel were recovered, and at Moenjodaro, although the defences had been mainly destroyed, the interior yielded the remains of a large bath lined with bricks set in bitumen, together with a rectangular grid of massive brick piers which may have supported a state granary, and a large hall with interior rows of brick pillars. The Lothal citadel also has a granary, and at Kalibangan the earlier walled town was converted into a citadel with a strongly fortified sect... the southern half and a residential area to the n... Quite clearly these citadels functioned as centres ... Indus cities, although the exact nature of political co... remains elusive.

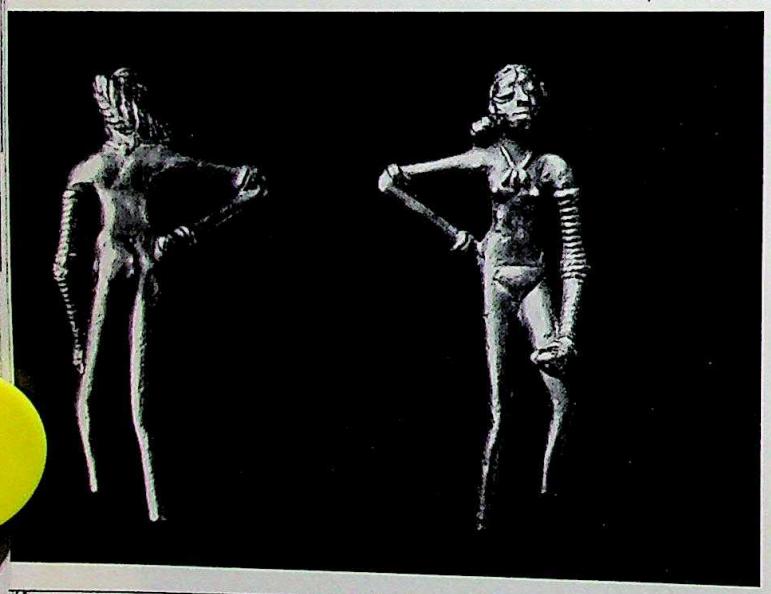
Adjacent to the citadel in each site lay the 'lower ... normally undefended except at Lothal, and covering s... two square kilometres in the case of Moenjodaro. H... the windowless dwelling houses opening on to inner co... yards were set along regularly gridded streets, with ... cesspits, toilet and bathroom facilities, and chutes ... rubbish leading through the walls into the streets. ... streets themselves had drains and possible watchme... booths on corners; all these things clearly exposed ... excavation for the modern tourists who visit Moenjod...

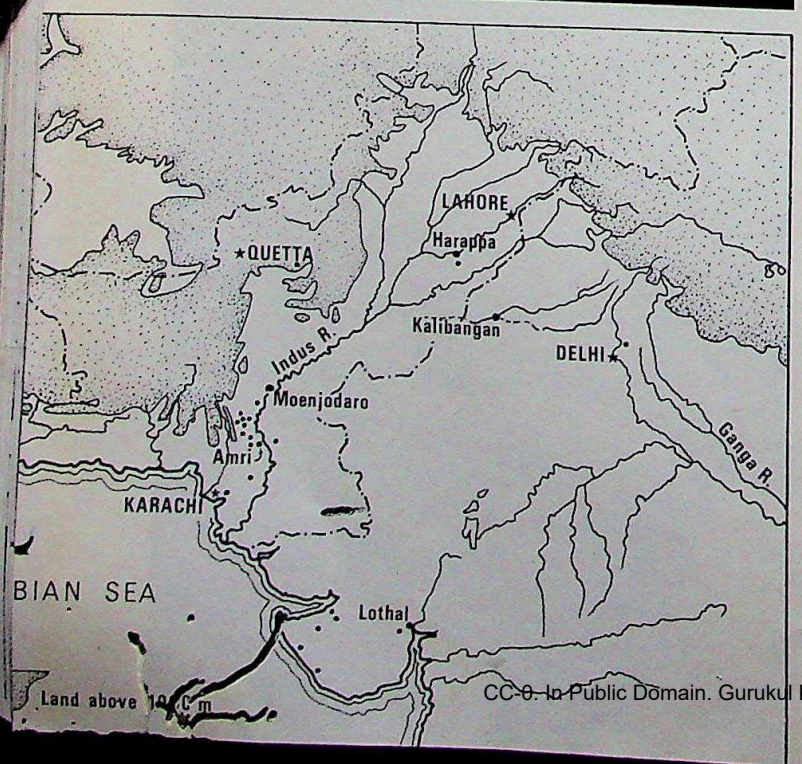
Some of the houses had two stories, and roofs ... presumably flat and of bamboo. Unfortunately, no defi... temples have to date been found in the Indus ci... although a possible shrine at Kalibangan had eviden... for the burning of fires on small altars. We know virtu... nothing of Indus religion, despite views of some schola... that what little evidence there is suggests links with ... later gods and concepts of Hinduism. The easterly pe... tration of late Indus settlements into the Delhi region ... be relevant in this regard.

One of the problems facing archaeologists in the in... pretation of this civilisation is that there is evide... a-plenty for city planning, architecture, and indus... crafts as potting, and bronze and stone-working. Of ... (apart from the painted pottery) there is little, and ... is mostly in the form of simple clay figurines of anim... and women, the latter sometimes heavily decorated ... necklaces. The rather enigmatic script with its basic ... pictographic nature, found on the seals used to st... the clay sealings on merchandise, is undecipher... Attempts to relate the script to Dravidian and In... European languages have not so far met with ... acceptance, and complete agreement may never ... possible. So we know little of the ethnic and linguis... background to the civilisation.

However, the Sumerians can help us to throw a l... light on the situation. Between 2500 and 1800 B... Sumerian and Akkadian records refer to the arrivals ... ships in Mesopotamia from a place called Meluhha; sc... authorities believe this to be the Indus Valley. A sm... number of Indus stamp seals and cornelian beads ha... actually been found in Mesopotamian cities of this per... but nothing of Mesopotamian manufacture has yet ... peared in the Indus Valley. So the evidence for trade ... slight, despite the fact that Lothal has a large dock li... with brick and entered by a canal. This could have be... used by sailing boats with a draught of up to three me... and any which did sail to the Persian Gulf probab... stopped at the islands of Bahrein and Failaka, which ... thought to have been known to the Sumerians as Dilm... A stamp seal which may have been made on Bahrein ... recently found at Lothal.

A bronze figurine of a dancing-girl (half actual size).
(National Museum, New Delhi)





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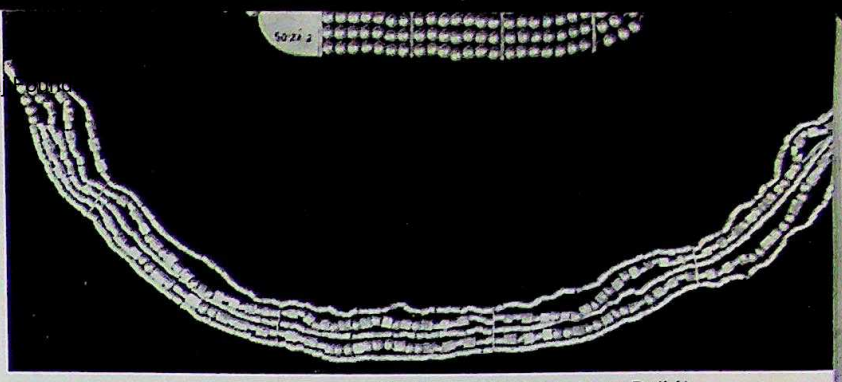
If Meluhha is indeed the Indus Valley, then this is our only direct literary source on the civilisation. It may also be that Meluhha is cognate with the Sanskrit word Mleccha which was used to refer to foreigners by the Indo-Europeans, and if this inference is correct then a Dravidian-speaking background for the civilisation may be most likely. At present one cannot be very dogmatic.

We now come to the sad end of the story, for soon after 1700 B.C. the major centres of the Indus civilisation were abandoned, never to be occupied again. At approximately this time the Indo-European speakers were entering Pakistan and India from the north-west, and one of their hymns of this period, known as the Rigveda, contains accounts of the sacking of cities which may have been in the Indus area. These early Indo-Europeans appear to have been mounted pastoralists, with the type of heroic chiefly society so well known for their linguistic cousins, the Greeks and Celts. They possibly had little choice to live in alien cities, and they may have been on poor terms with the inhabitants of the latter, since the remains of a massacre have been found in the upper levels at Moenjodaro, and the inhabitants of Harappa finally blocked up the gateway to their citadel, presumably for defensive reasons.

Nevertheless, it does seem unlikely that small groups of pastoralists could have brought to an end such a civilisation in the hey-day of its glory. Archaeologists and environmental scientists have brought a number of other factors into the picture, and it is becoming clear that the cities were already undergoing serious decay before there is any tangible evidence for the new-comers. Removal of forests, climatic dessication, and massive flooding in the lower course of the Indus have all been suggested as reasons for decline, and it may have been to the misfortune of the civilisation that these disasters all climaxed at rather much the same time. Kalibangan suffered a rather different stroke of bad luck, for it was apparently left without a water supply by a natural process of river capture. So the Indo-Europeans probably found a decaying civilisation from the outset of their migrations as did the Anglo-Saxons who settled amongst the decaying Civilisation of Roman Britain.

The decline of a civilisation is a sad note on which to end an essay. The peoples of the Indus Valley did not contribute to later civilisations as did the Egyptians and West Asians, and without archaeology their one-time existence would still be unknown. However, the world does now know something of the achievements of the Civilisation, and at Moenjodaro one can still walk through the streets and houses once peopled so long ago. Not all of the city is yet excavated, and this would be a massive undertaking. But the site does now have an excellent museum and a guest house for visitors, and it can be reached by air directly from Karachi. A two-day stay and lots of film are recommendations for any intending visitors.

THE AUTHOR: *Peter Bellwood is a Senior Lecturer in the Department of Prehistory and Anthropology at the Australian National University, Canberra.*

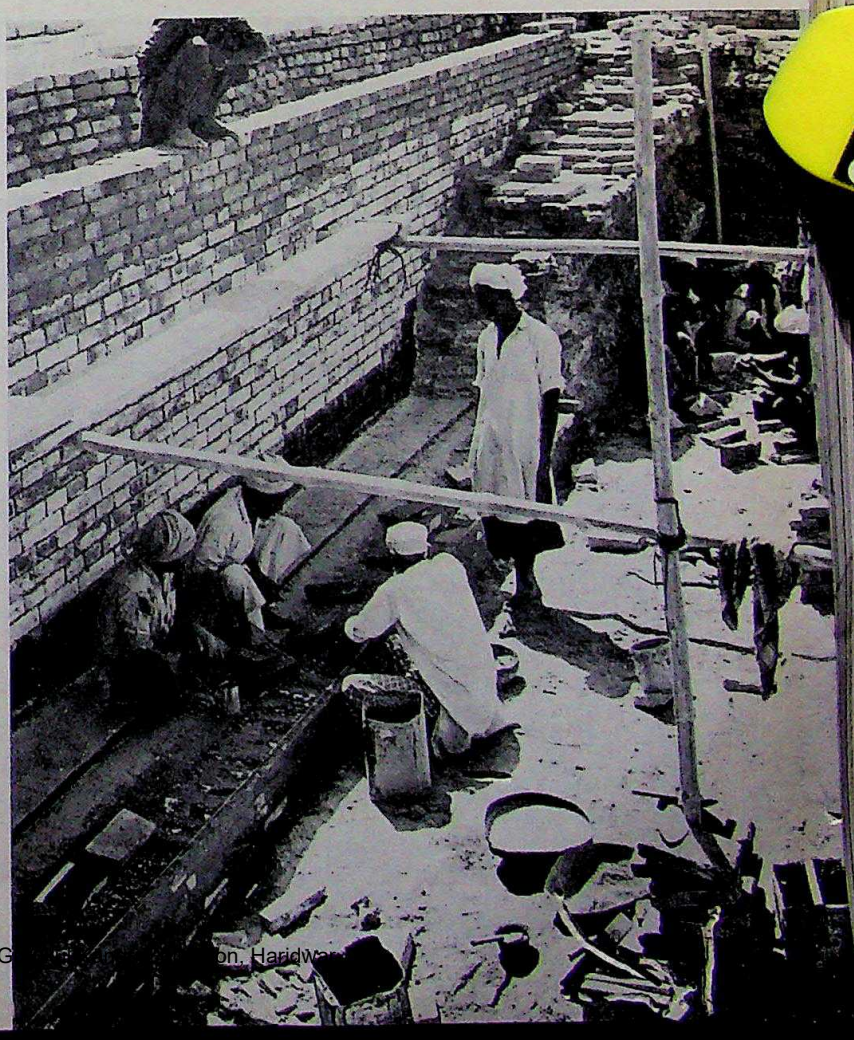


(National Museum, New Delhi)

Gold jewellery from Moenjodaro.

(Camera Press)

The Great Bath, and specialists replacing damaged bricks.



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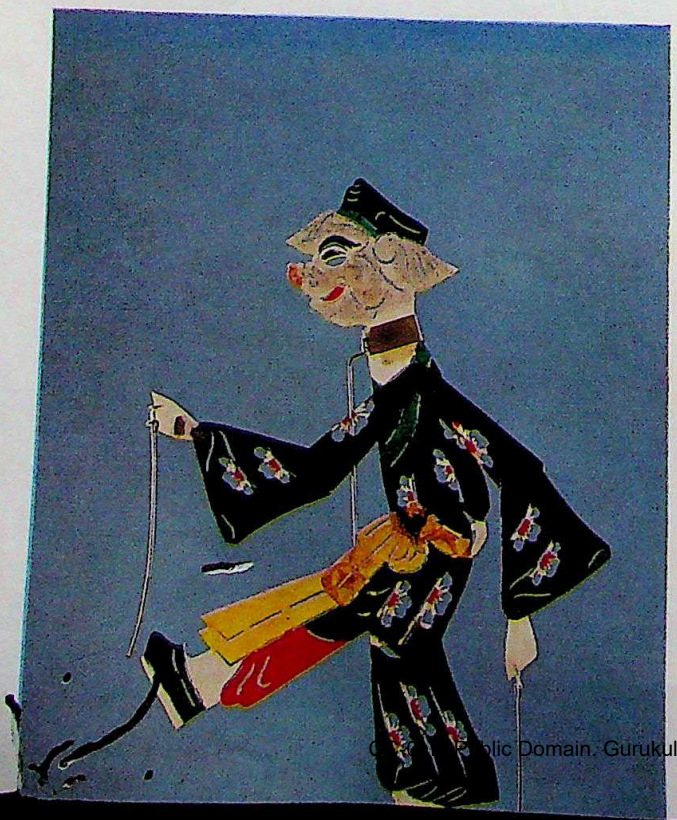
On this page, three photographs of Chinese shadow puppets, by Ian McKay, A.I.S.

VOICE AND SHADOW

Kathrine Sorley Walker



THE SHADOW of outstretched hands against a wh
wall . . . the fingers begin to curl, to bunch, to spre
and shapes appear in sequence: a rabbit, a spider,
tortoise, a squirrel . . . a small child watches entranc
This is the genesis of the varied and inventive mag
known all over the world and altering in character w
place and time, that we call the shadow show.

All forms of theatrical entertainment have their orig
before record, deep in primeval life. Dance, mime, sto
telling are basic human activities, and with them sure
have to be classed puppet shows. No doubt, prehisto
hands created animals on cave walls out of the shado
thrown by camp-fires; no doubt, small shapeless dolls
bone or stone were employed by tellers of tales to a
an extra dimension to the spoken word.

Once in the sphere of ancient history, the shad
theatre first finds record in Asia. A cave in Sargu
Bengal, is said to have been used as a shadow thea
during the second century B.C., but the evidence for t
is slender. There is a sturdy tradition that 'shades',

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ey are often called, were invented in China during the ign of the Han Emperor, Wu Ti (140-86 B.C.), although n Kai-ti, in his book *On the Origins of the Chinese ppet Theatre*, gives a much later date — the Fifth nasty, in the seventh to ninth centuries A.D. There is ly general agreement that Chinese shades were fully eloped by the tenth or eleventh centuries A.D.

These Chinese shades are of exceptional delicacy, ually about twelve inches high. They are cut, of paper nness, from the finest hide and painted with translucent lours. At shoulder, elbow and hip they are jointed with k knots, their waists are hinged, their hands flexible. ternative heads can be fitted to a figure by a slot in e collar, and they are worked by thin pins, three to r inches long, in the neck and hands, connected to all rods by thin string or silk.

For the old Chinese shadow plays a linen or silk screen s set up on a strong table, with lanterns on both sides e screen. With the rods, the manipulators pressed e figures against the screen, themselves invisible to the dience. Gradually the technique was developed so at two or three puppeteers worked each character.

Nowadays, designs vary considerably between the adow theatres of different provinces, no doubt accord- g to the puppet master in charge. The plays are com- etely pictorial, with detailed and charmingly painted ttings as well as human and animal figures.

Similar in style but slightly more robust in appearance d without the exquisite backgrounds of the Chinese ays, are the Javanese shades, the *wayang kulit*, which e first recorded at the beginning of the tenth century. eir original condition was altered, however, after the ming of Islam to Java in the mid-fifteenth century. The to on representations of men resulted in the shades coming immovable figures, and only later was move- ent partially restored, in arms and legs. Balinese shades e more naturalistic, and the inference is that they were affected by this Muslim dictate.

Seen at their best in informal village settings or in the urtyard of a house, and watched all through the night, e splendidly designed and carved parchment figures the Javanese *wayang kulit* play out the events of the ahabharata and the *Ramayana*, the battles of Arjuna and s heirs. Action and warfare are an immensely exciting ea of shadow plays. It never fails to be thrilling, for stance, when, during the abduction of Sita by Ravana, e great King of the Birds, Jatayu, attacks the flying emon. Backwards and forwards, enlarging and diminish- g in sweeping movement, the fight rages from one side the screen to the other with marvellous beauty and gour.

The origins of the Javanese shades may be unknown t their life is strongly tenacious, maintaining the old aditions and themes while introducing plays based on ewer history and even on people's heroes. However, e Hindu epics are the staples, and the whole entertain- ent is closely identified with religious feeling. There e offerings and invocations; the *gunungan*, the tree of

Above; Queen Mandodari, from the Indian state of Andhra Pradesh, and a general from Szechuan in China. (Museum für Völkerkunde u. Schw. Museum für Volkskunde, Basel).

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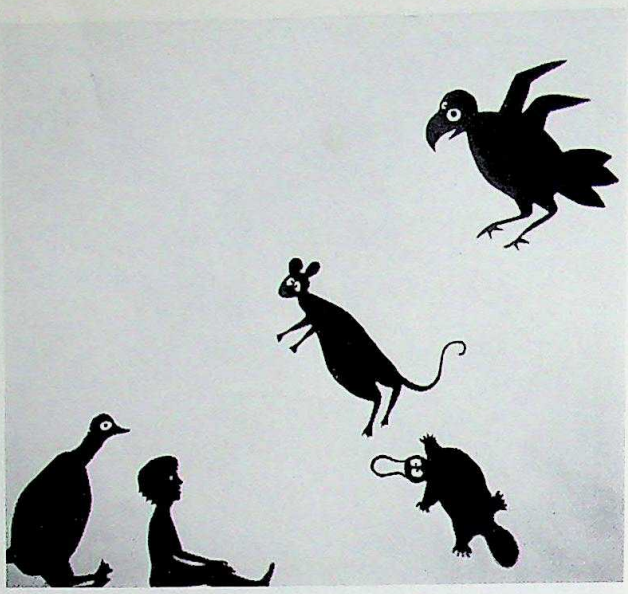

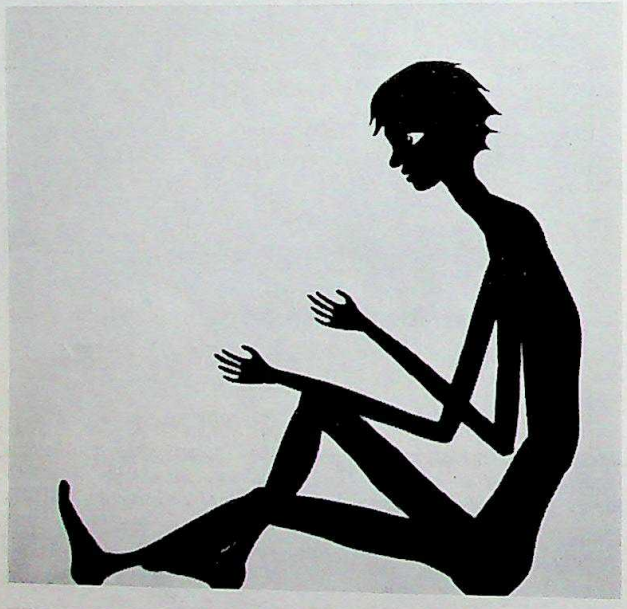

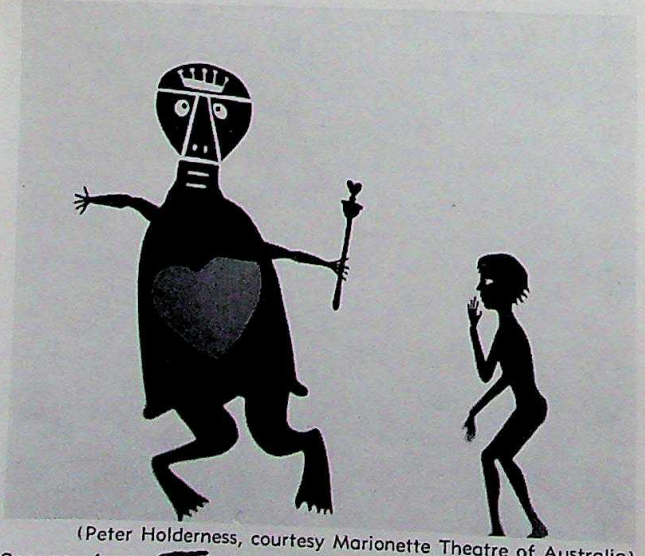

(Peter Holderness, courtesy Marionette Theatre of Australia)

Scenes from Richard Bradshaw's Australian shadow-plays. Above, from a version of Alice in Wonderland, *adapted into Pitjantjatjara, an Aboriginal language, from Lewis Carroll's story by Alice Sheppard.*

life, serves as prologue and epilogue to each play; there is much mystical and theological symbolism. Pe... In the audience themselves believe that while watc... a shadow play they are protected from evil . . .

The personalities of the *wayang kulit* are clearly det... and sometimes represent four stages in human evolu... Intellectuals are small and slender, the earthier types ... the biggest; servants, often comic, are contorted ... physique and coloured black and white. A rare, fo... type is an animal-headed giant.

Over the centuries, Javanese-Malay-Polynesian g... became identified as characters with Hindu deities ... names differ slightly in transliteration) except for ... 'divine hermaphrodite', Semar. Retaining his own id... tity, this important figure was elected into Hinduism ... the purpose of the shadow plays as a wise elder bro... of Shiva, but exiled from heaven.

Nowadays, the *wayang kulit* are popular through... Indonesia, Malaysia and Thailand. Each group tak... character from the man in charge, the *dalang*, who ... the creative genius and master craftsman of the perfo... ance, deciding on the form of the play and speak... every *rôle*, cleverly interweaving classic scenes with lo... and topical allusions.

The performance is theatre in the round. The audie... chooses whether to sit and watch the manipulation of ... shades or in front of the screen and see the sha... illusions in action. Traditionally, this division was by s... the men sat behind and the women in front of the d... ing screen.

Shadow plays spread their fascination and enchantm... swiftly and widely. India developed its own sha... theatre, and, in the sixteenth century, possibly the larg... shades of all, over two metres in height. Nowad... shadow show traditions flourish in Orissa and Kerala ... the puppeteers of Andhra Pradesh present *tholu bom... lata*, the dance of the parchment dolls.

'Leather' is the term often used to translate into Eng... Asian words relating to the shades, but 'hide' is a be... translation; in the British Museum's account of the Raf... Collection of shadow puppets, Jeune Scott-Kemb... makes it clear that the Javanese shades (and presuma... others) are of parchment. The hide is not treated w... tannic acid or mineral salts that makes it leather. Leat... unlike parchment, would not allow light to penetr... Interestingly, the hide used for puppets has local links: ... asses' hide in China, buffalo-hide in Malaysia and Indo... esia, camel-hide in the Middle East.

The Middle East has a very old shadow show tradi... based on one of the most enduring and endear... characters in the puppet world, known in Turkey ... Karagöz and in Greece as Kharaghiozes. 'Black E... in translation, is an ugly little man with a pug nose ... round beard and a shaven head. In Ottoman Turkey ... was immensely popular as a café and street co...

* *Author of an article on the forging of great gongs for ... gamelan orchestra in HEMISPHERE, Vol. 20, No. 9.*

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action between the seventeenth and nineteenth cen-

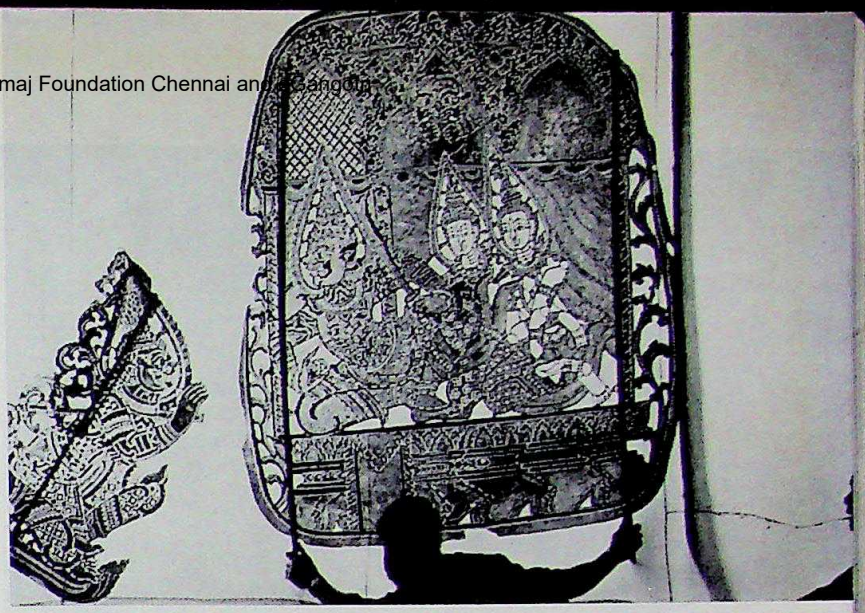
ries.

His origins are obscure, but he seems indigenous. One gestion is the political lampooning of one of Saladin's nerals, Karakush, by a jealous rival. This gives a enth-century date, for Karakush helped in the building the Citadel in Cairo and was later in command at Acre en it was under siege by Richard Coeur-de-Lion. nother idea is that Karagoz was a real workman on a kish mosque who delayed the work by entertaining mates, and was executed by order of the Sultan. The tan however (so the tale goes) regretted the action, d his vizier had the shadow figure made in memory the dead man. The story is suspect — there is an ppo-similar one about the origins of Chinese shades, which the memory of an Emperor's dead concubine is petuated by a shadow figure of her. This celebration the dead by a moving shadow is an interesting thought, only; nowadays it is uncanny to watch old films whose rs are now dead, and younger generations, who never ew them alive, may feel towards them as audiences towards Karagöz . . .

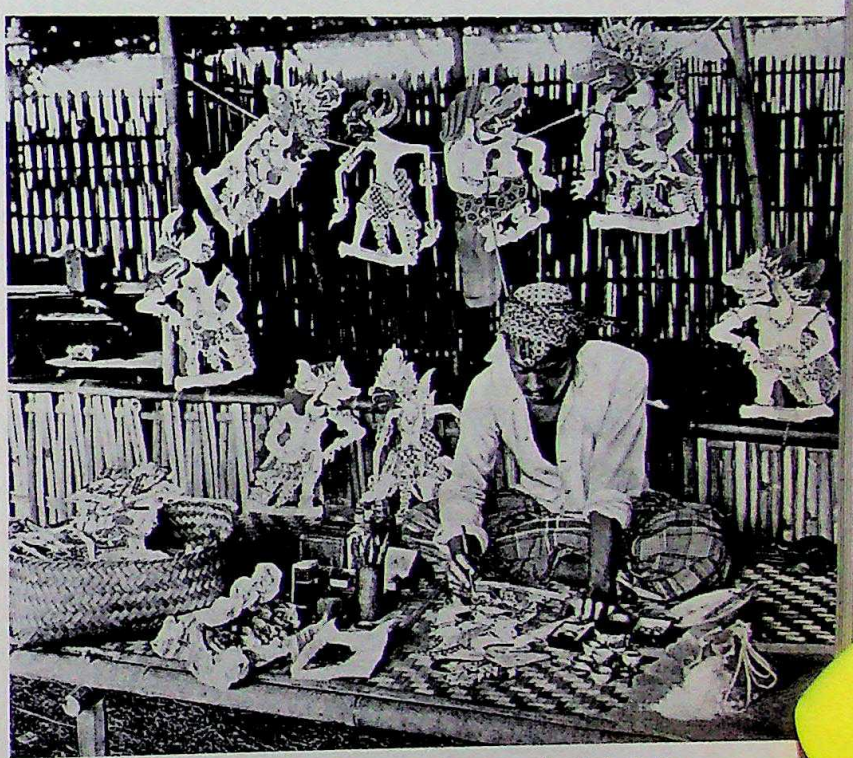
in Greece, as Kharaghiozes, Karagöz took on a different aracter, a poverty-stricken rascal who lived on his wits. both metamorphoses he had a wife, but in Turkey his ncipal foil was a pedantic educated man called Hacivad. s transfer to Greece from Istanbul came about in the ddle of the nineteenth century, but his popularity was rticularly great in Athens during the 1930s and 1940s, en a puppet master named Anthony Mollas drew the ge crowds.

Western Europe's relationship with shadow shows has ver been as well founded as that of Asia, but it has d exciting outcrops. The influence was largely Chinese, d enthusiasm increased as a result of the eighteenth ntury's love affair with China. There had been earlier d less sophisticated shadow shows — in Italy and rmany during the seventeenth century travelling shades e recorded at the great fairs, and Nicolas Audinot owed some at the Foire St Germain in Paris in the st half of the eighteenth century. The first famous rmanent European shadow theatre, however, was started François Dominique Séraphin at Versailles in the os, and moved later into Paris to the Palais Royal, ere it continued as a family enterprise until 1879. ring that time many famous shadow plays were given, cluding *Le pont cassé*, *La chasse aux canards* and *Les ux aveugles*, and the name 'Séraphin' became a syn- m in France for 'shadow theatre'. These *ombres noises*, which were also popular in Italy and England, erived from the Asian technique by concealing the echanism from the audience and installing complicated ngs and wires to move the figures.

Some years after the closing of Séraphin's theatre at e Palais Royal, in 1887, Paris saw one of the most lively d challenging outbursts of creativeness in the Euro- ean shadow show. 'Le Chat Noir', Rodolphe Salis' literary ete on the Boulevard de Rochechouart in Montmatre,



A scene from the Ramayana performed some years ago as a shadow play at Siem Reap, the village near the fabled monument of Angkor Wat.



Cutting and painting figures for a shadow play in Indonesia. Photograph taken about seventy years ago and published by Kleynenberg, Haarlem, (Courtesy National Library of Australia), and the figure of Prince Achmet *from a shadow-film by Lotte Reiniger and Karl Kosch, Germany 1923-26.*

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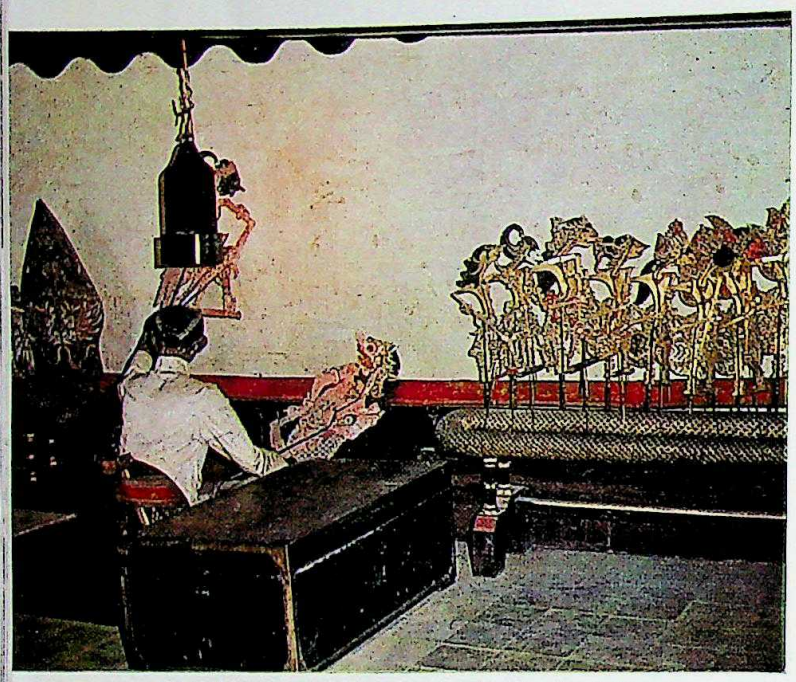
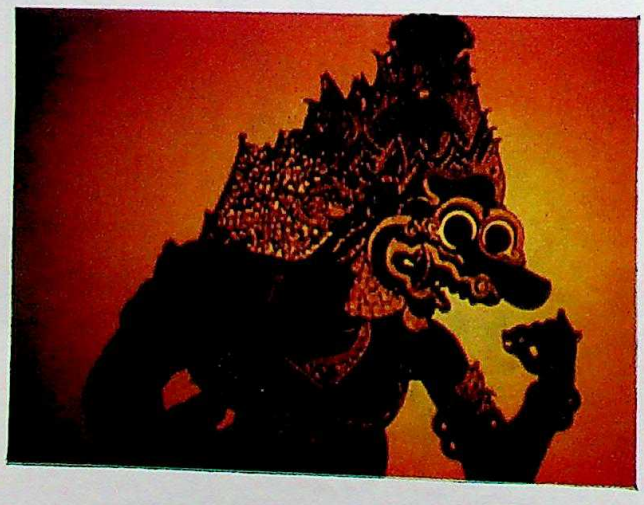
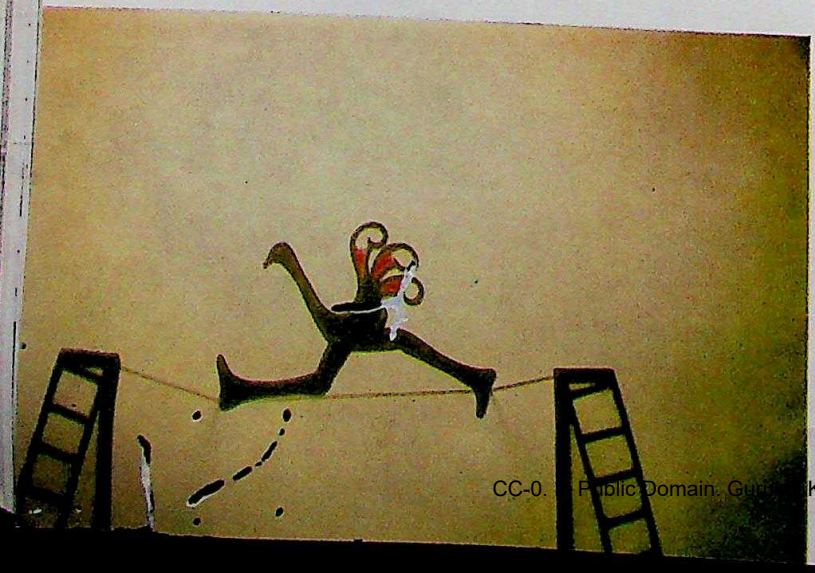


The dalang, *manipulator and voice for the Indonesian* wayang kulit, *or shadow plays, at work; one of his 'actors', from the Ramayana, the Hindu epic adopted throughout South-East Asia, and Ostrich on Tight-Rope, by Richard Bradshaw. (Photos, Educational Media Australia, Australian Elizabethan Theatre Trust and Marionette Theatre of Australia).*

Two Indonesian wayang kulit *figures: Duryudana, and B one of the Pandawa brothers. (Photos: Norman Plant, A.*





launched a series of shadow entertainments. They v tableau characters rather than articulated ones, cut cardboard at first but later from zinc, and drawn by talented cartoonist and caricaturist, Emmanuel Po who used the pseudonym 'Caran d'Ache'.

The vogue was established. For the next ten ye Henri Rivière and other authors wrote plays that c bined witty comment and poetry, and appealed to sophisticated audience who became interested; and c shadow theatres followed suit, until a large number operating in Paris at the turn of the century.

In London, a French-Italian called Ambroise, the decessor in business of the famous Astley, had opa a shadow theatre in Panton Street in December 1775 like Séraphin, had shown plays such as *The Broken Br* and *Duck Chase*. Most of his shows depended more scenic excitements than on good stories or charact but they were popular. Later, shadow shows joined travelling Punch and Judy booths, some of them sh ing Punch during the day and the shades at night; had regular pitches in popular centres like Regent St or Leicester Square. These travelling shades were ca Galanty Shows — 'fine' shows, from the French ga as in *fête galante* — and Henry Mayhew in his fam *London Labour and the London Poor* (1858) record talk with a typical puppetmaster of the time.

Germany and Russia (where the great Sergei Obraz became director of the State Central Puppet Thea included shadow shows in their activities, although haps other forms of puppets took precedence with th From Berlin in the years after the first world war emer one of the greatest names in European shadow — o she prefers to call them, silhouette — films: Lotte Reini She and her husband, Carl Koch, launched her first

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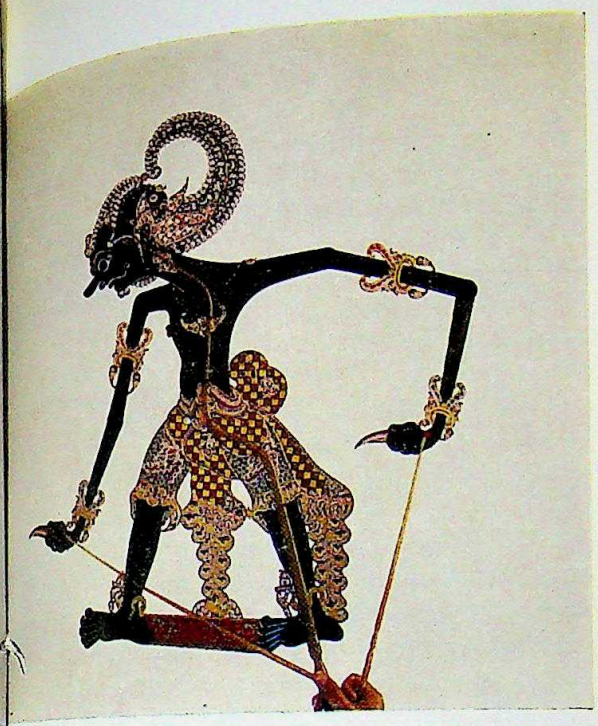

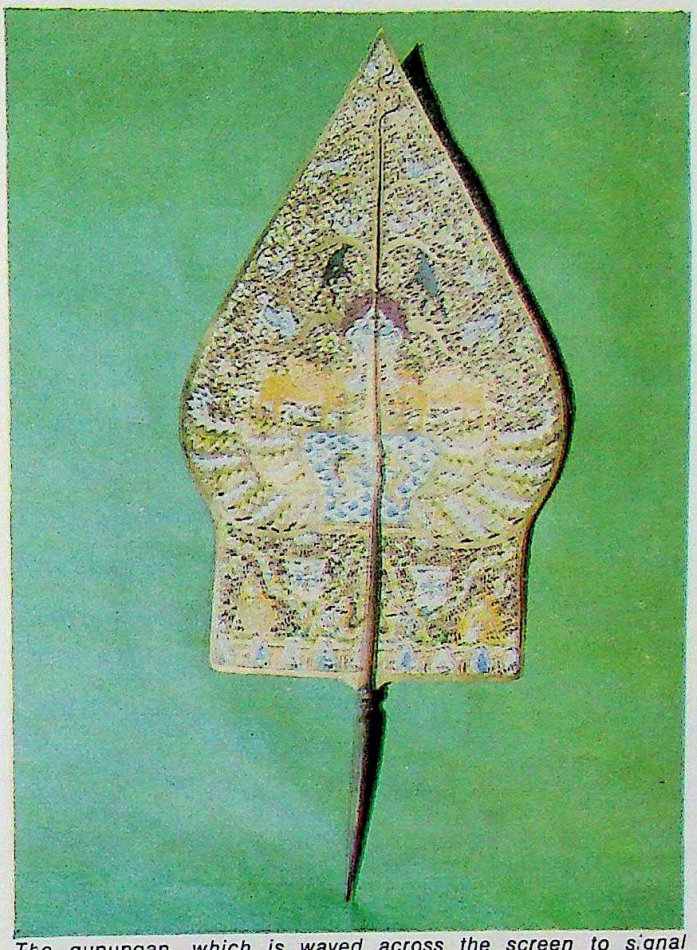

The gunungan, *which is waved across the screen to signal the end of part of the* wayang kulit *shadow play, and a figure of Arjuna from the Tholu bomolata plays of Andhra Pradesh* *(see page 35).*

ength feature film, *The Adventures of Prince Achmet,* in 926. It had taken three years to make.

Reiniger's contribution to this and the many later films e has made is, of course, the artist's. She had drawn e figures and scenes included in the various frames nd then built them up from varying thicknesses of layered issue paper, so that a range of tones from white to black ves depth and interest. Each scene, after being cut ut by hand, is photographed on a horizontal glass plate from below.

More recently, she has worked in colour, using coloured elatine to build up the picture. The colour films include *The Star of Bethlehem,* a nativity play with music com- osed by Peter Gellhorn.

Inventiveness in the use of modern materials, abstrac- on rather than story-telling, mark the experimenters of oday, and keep the art form in a healthy and developing ate. Sophistication, and social and political comment, ave recurring vogues in shadow shows, although their se in this way has diminished considerably with the crease in popularity of strip cartoons. They are, how- ver, in spite of the rabbit-on-the-wall association with ursery entertainment, predominantly an adult enthusiasm.

Their beauty of design, whether in the elegant grace of e Chinese shades, the exciting shapes and forms of the ranese ones, or the strong fantasy of the Reiniger ms, gives them great aesthetic appeal. This, combined ith the technique's ability to creat imaginatively when deals with well-loved religious or folk stories and their haracters, gives the shadow show, in East or West, an nduring fascination.

HE AUTHOR: Kathrine Sorley Walker, a London critic, author nd poet, wrote on the Asian and European traditions of three- imensional puppetry — glove, rod and string puppets — in EMISPHERE, Vol. 20, No. 5.

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FIBRE IN 3-D

SOMETIMES the search for newness in the arts can lead to purposeless gimmickry, but at other times it means that a whole new field of design is opened up.

That is the case with the work of Toshiko Horiuch Japanese artist who has just toured Australia, lectur and listening.

She explains that she began knitting or weaving forms illustrated opposite after working for some time the United States as a textile designer: 'I had been put designs on the fabric, but I felt that I should know m about the actual formation of the fabric, although I enjo working with colour. Then I began to do a kind of op weaving, and creating flat wall-hangings. And, at ab the same time, I began to design the piece you mi call *The Lanterns* on the opposite page.

The method Miss Horiuchi uses is knitting, mostly w needles which she crafts herself.

'First, I make a model of the finished object I want knit. Then, I do a detailed sketch, putting in every sin knot. But, in addition to knitting, I use crochet quite a l depending on the end product. For example, in *Image the Forest,* which is opposite, I used crochet.'

'Actually, the technique did not go down with the publ too well at first, but now it is otherwise: I have ha exhibitions of this kind of work, and my textile desig in Paris, Tokyo, New York, Detroit and other major cent in the United States, where I worked for several yea to return afterwards to teach in Japan.'

'You see, some of my work, such as the *Romanesq Cathedral,* approaches architecture; in the *Human Ha mock,* in which the children can play, they find conta with each other in the confined spaces of present-d Japanese cities, and, thanks to this contact during pl time, they learn to live with others in those cities, at same time getting some exercise in a confined space.'

NO-NONSENSE PAINTING

PAINTINGS by Australian youngsters are pretty well like paintings by kids anywhere else in the world: straightforward, no-nonsense jobs that say exactly what the artist wants them to say, fortunately without any mixing-in by adults to make them 'understandable'. With the exception, of course, of the subjects, the paintings in the richly illustrated *The Aboriginal Children's History of Australia* (ISBN 0 7270 0236 8) put out by Rigby Ltd. with the assistance of the Aboriginal Arts Board of the Australia Council, could have been done by youngsters anywhere, for they have that immediacy and freshness and frankness of work by youngsters who have no idea what inhibitions are, and who—at least up to the time of their painting these pictures—seem to have escaped the restrictions of the art teachers, so the paintings have what the advertising specialists would call impact, and show a joy in living which most adults have forgotten about.

The prose matches the pictures. One picture, vivid with its ochre-coloured soil that somehow becomes sky as well, with well-organised red mountains in the background and a few trees and clumps of stumpy grass with a lonely, dark figure walking across the centre begins the section called *My Relations* (delicate ground for any editor to tread on). The caption, simple and clear enough, says one really needs to know about this particular relati 'This is my uncle Cyril. He walks around a bit.'

The prose is simple and straightforward, dealing w both Aboriginal and White Man's doings in a splen mixture. The History covers *Dreaming, Old Time, T Macasans, The Whitefellas, Today* and *My Country.*

There is a simple and evocative poetry in the line th goes with a picture dominated by three birds (one meau one blue, one purple, each with wings of different colo to emphasise the splendour of the Creation)—a T which reads: 'Everything was full of life and happines

The illustration from the *History* that we reproduce our cover design is different from most—not that it is l expressive, frank or direct than the others, but it has simplified quality of what is best in painting, a reduct to essentials in line and colouring that the finest of Japanese masters would envy, for it has the stark rea of the best in poster art, telling vividly the story of a da carried out by Aborigines after an early scuffle with w settlers. It is by Stanley Jangala Gallacher, who is Yuendumu in the Northern Territory.

DENIS BO

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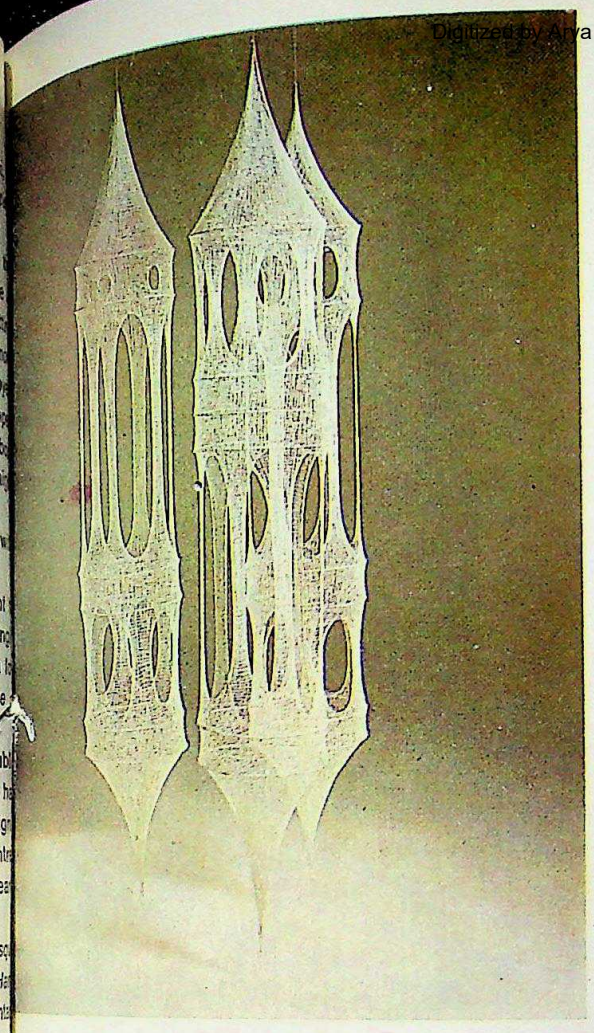
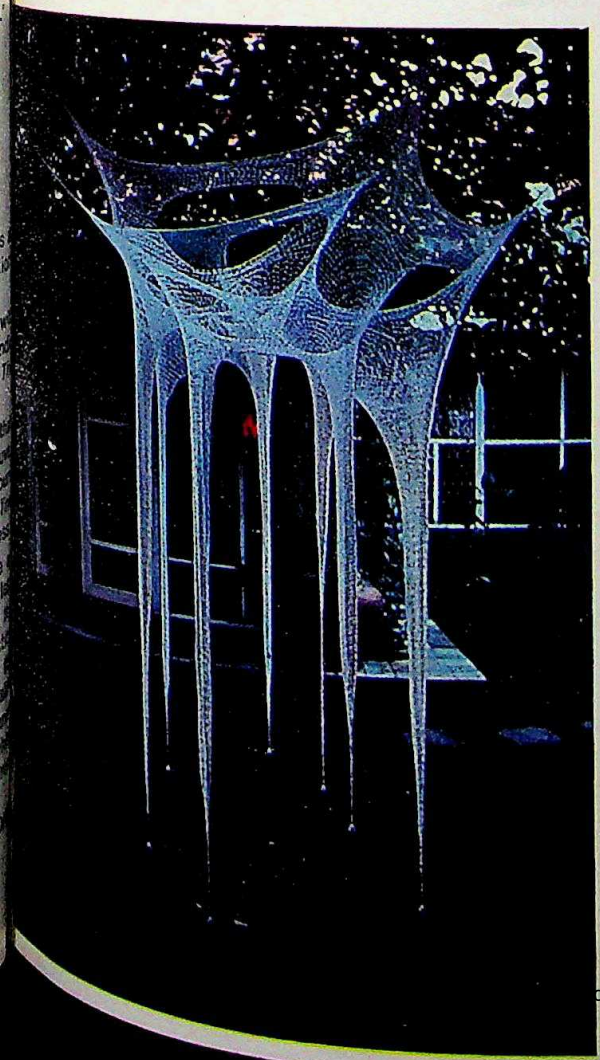
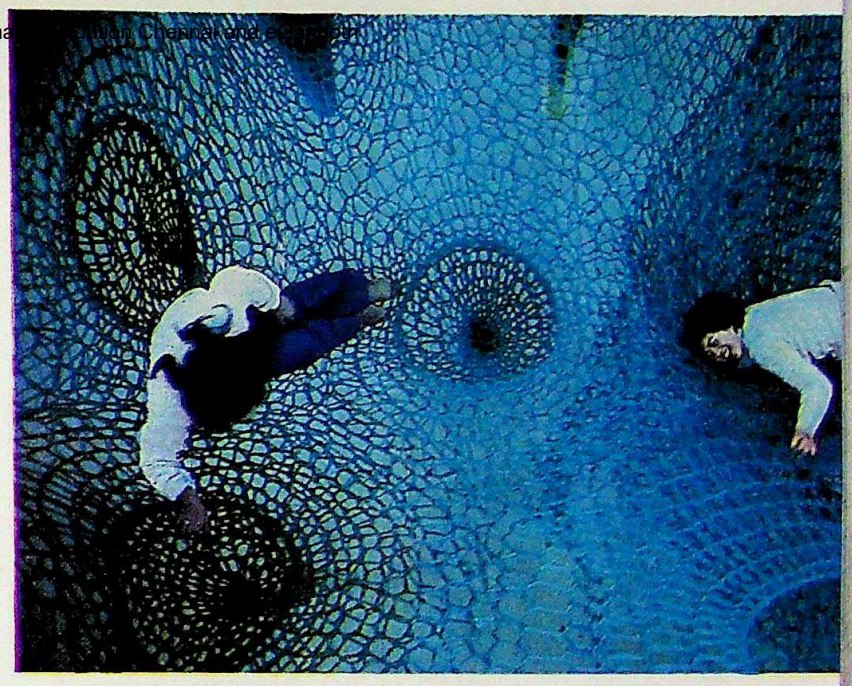
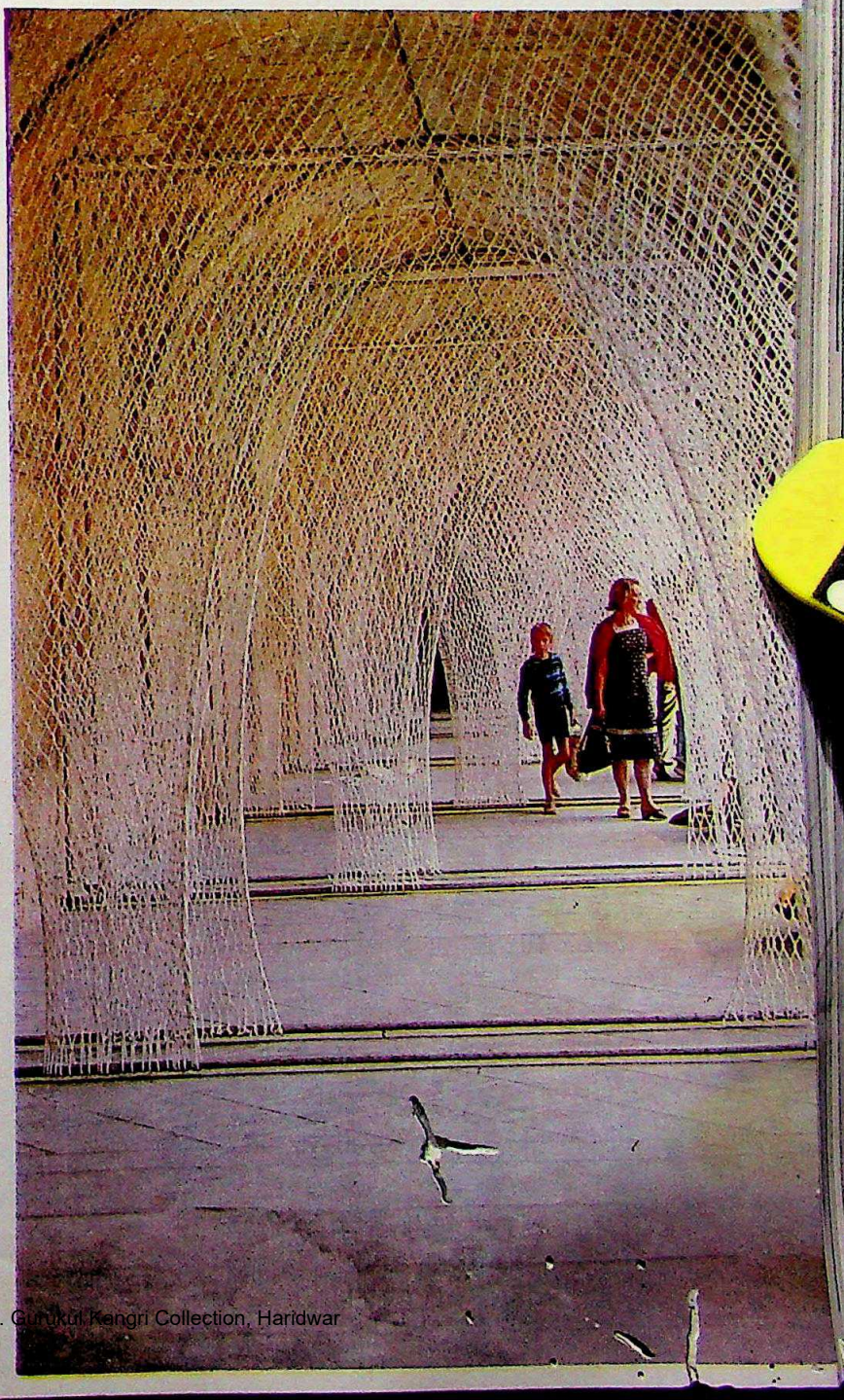


Image of the Mosque and, below, *Image of the Forest*





Children's Hammock No. 2 and *Fibre Columns in Romanesque Church*



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FROM EARLIER FLEETS

Hemisphere's Aboriginal Anthology has been prepared in conjunction with the Curriculum Development Centre and the Aboriginal Arts Board.

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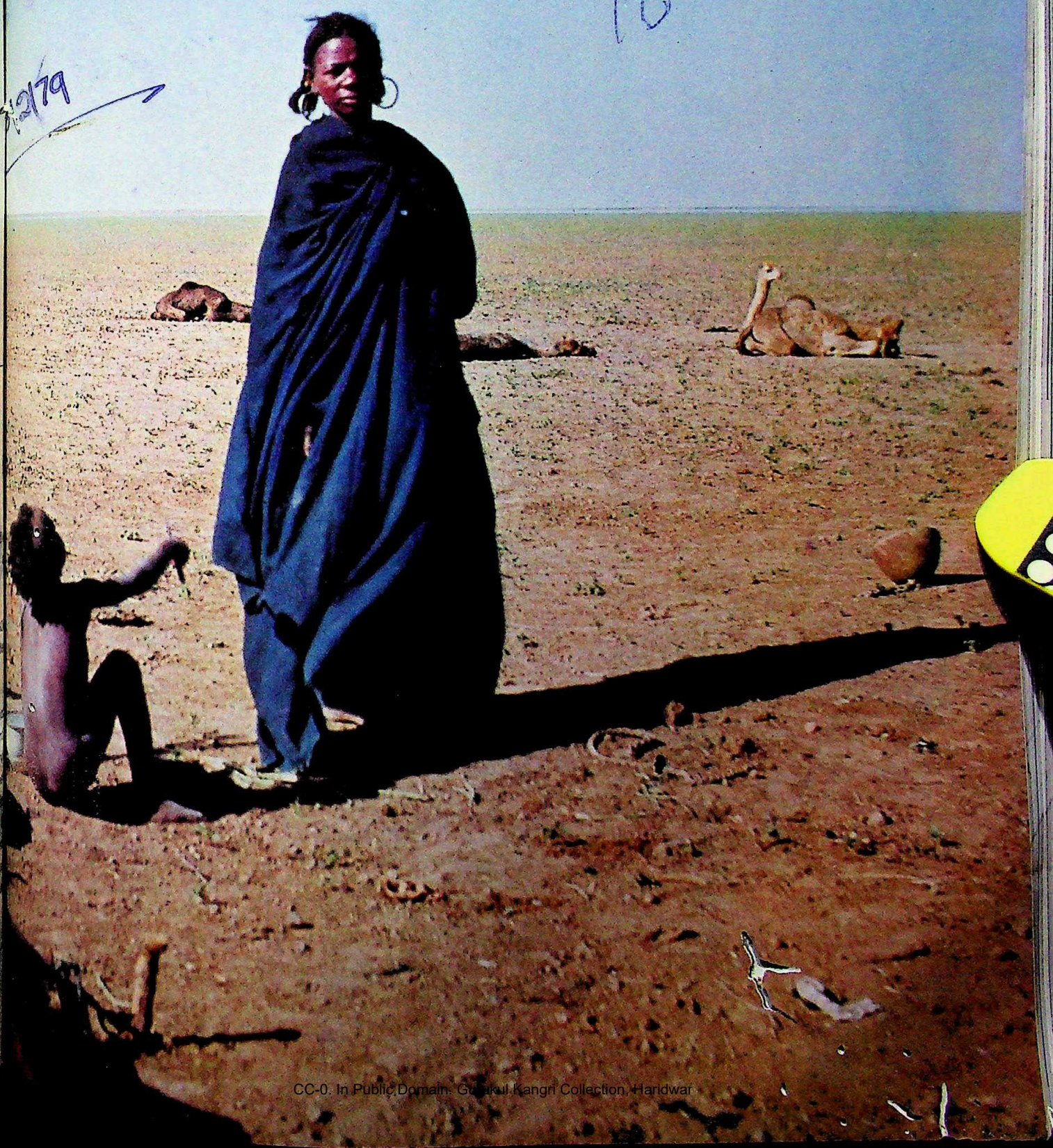

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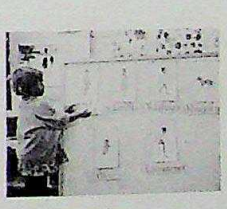

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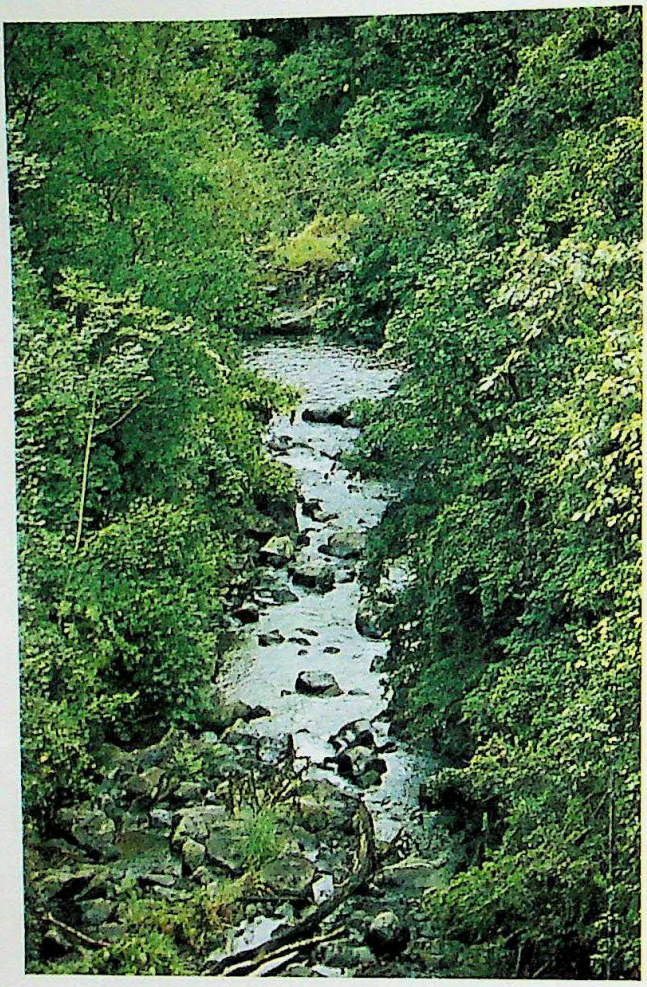
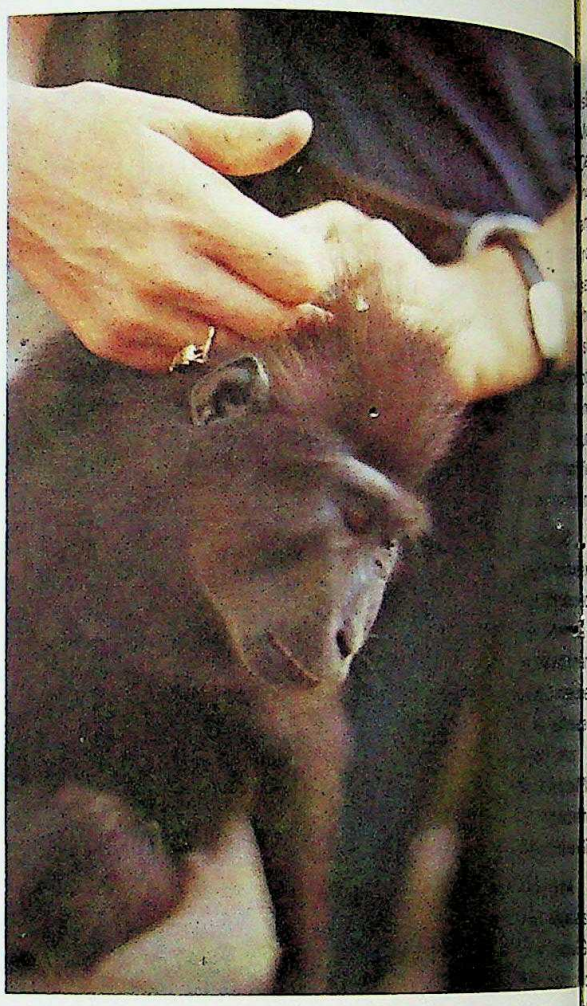


The scenic Karaenta Reserve in South Sulawesi. (All photographs by the author).



Celebes Black 'Ape' (Macaca nigra); a gentle-natured female called 'Nona', which is kept as a pet.

A WORLD OF ITS OWN

Colin P. Gro

DURING the Pleistocene, the ice-sheets swept down over Europe and North America, and the sea level fell, deprived of so much water. Shallow seas were therefore converted into broad plains, connecting land masses and islands, so that animals and plants spread unhindered from one area to the other. New Guinea was joined to Australia; the Greater Sunda Islands (Sumatra, Borneo and Java) to South-East Asia; as recently as about ten thousand years ago the sea levels were still low enough for this to happen.

This, broadly speaking, is why the Greater Sunda Islands are inhabited by monkeys, lorises, cats big and little, bears, wild dogs, civets, elephants, rhinos, ta deer, wild cattle, shrews, squirrels and porcupines—i them typical mammals of South-East Asia. And it exp why New Guinea is inhabited by a suite of mam closely related to those of Australia: wallabies, kangaroos, marsupial 'mice' and 'cats', possums, cusc echnidas, water-rats, although there is, superficial rather different feel to the fauna because New Guine largely forested, Australia largely open, arid country

Between these two major regions, each forming a s land-mass at times of low sea level, lie numerous isl in the south, the chain of Nusatenggara or Lesser S

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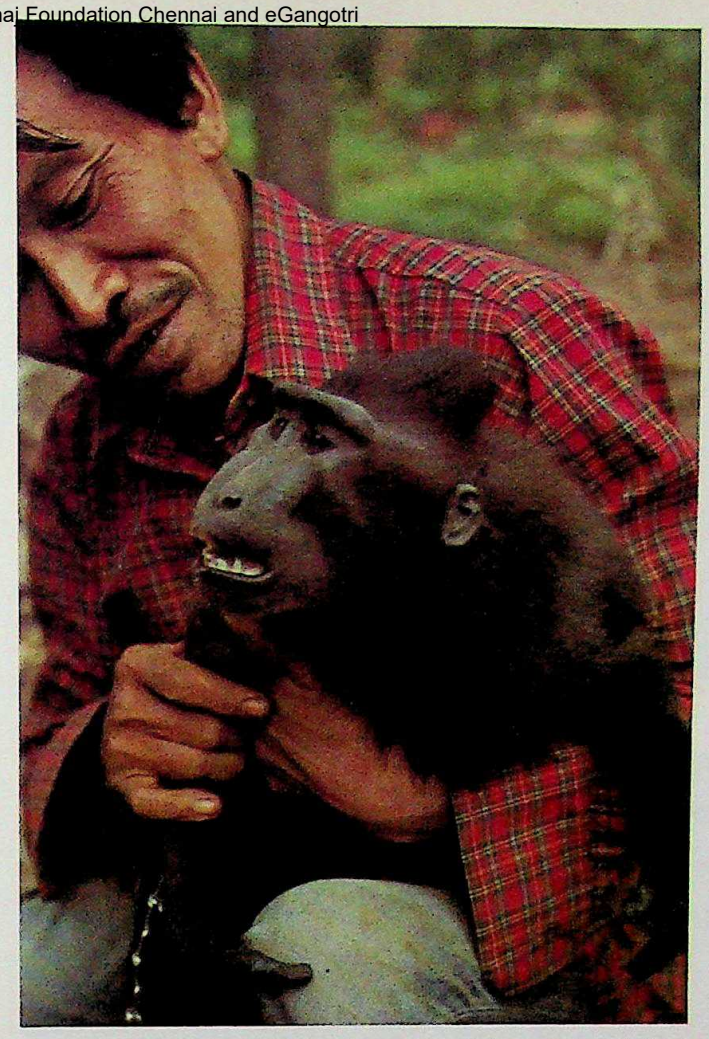
slands, from Bali east to Timor; and further north the Moluccas (Maluku) and the big spider-shaped island of Celebes or Sulawesi. Mostly these islands have very few indigenous mammals, and not many animals of any kind; and it seems fairly clear from bathymetric surveys and from geological investigations that they would have been separated from the two major regions throughout most of their history: that never, perhaps, since they became islands, would they have been connected by land to any other land except, in some cases, to each other. They sit in deep water, and all the animals that reached them, unless they could fly, did so by chance drifting on logs, floating vegetation masses, or through some other infrequent event.

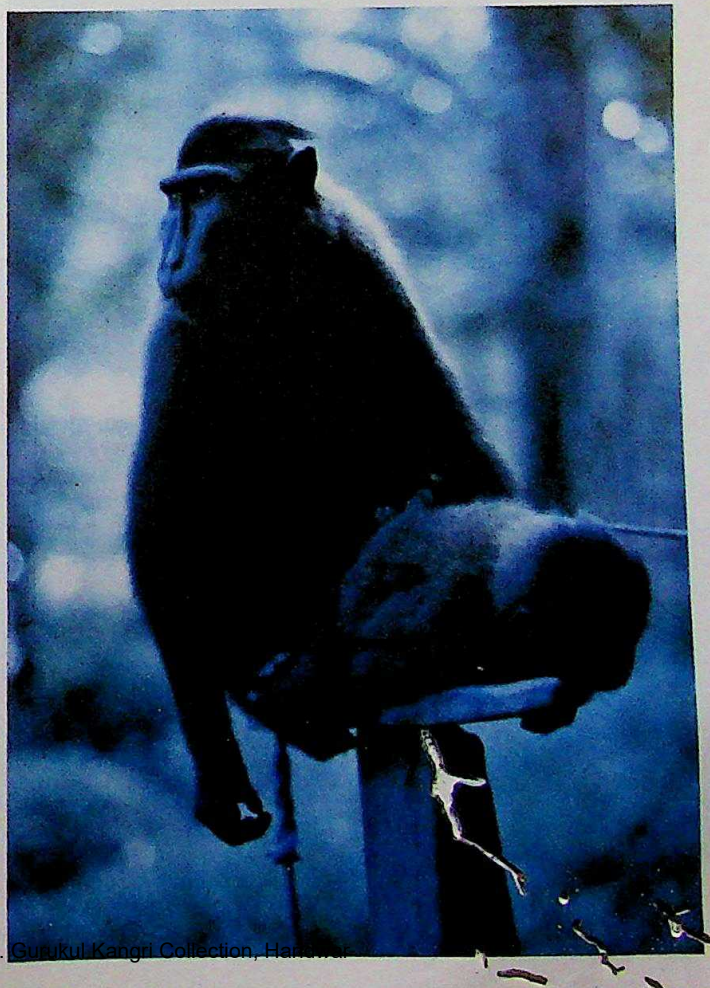
Sulawesi, the largest of these islands, seems to be an exception to this. Before the beginning of the Pleistocene, according to the theory of the geologist Van Bemmelen, it was joined to Java by a land bridge; this tectonically unstable land bridge then collapsed, and Sulawesi has been isolated ever since. The result of this is that the fauna of Sulawesi, or at least the mammals (with which I am tolerably familiar), is related to the very earliest—Pliocene or upper Miocene—fossils found on Java; and through them, to the Miocene fossil forms found in the Siwalik deposits of N.W. India and Pakistan.

And the fauna of Sulawesi, alone among the deep-water islands between the South-East Asian and Australia-New Guinea land masses, is not impoverished. One hundred and fourteen species of mammals are found there: this is only slightly fewer than in Sumatra or Borneo, and about the same as in Java. But there is a kind of imbalance among them, for a relatively small number of distinctive groups are represented, and each of them has diversified on the island. Thus there are five species of shrew (*Crocidura*), found nowhere else and descended from a common stock; four species of monkey (*Macaca*), also restricted to Sulawesi and related more closely to each other than to monkeys elsewhere; and nineteen species of the genus Rattus, some representing widespread commensal species but most restricted to Sulawesi, as well as thirteen other species which, broadly speaking, can be described as rats, and restricted to Sulawesi. There are also a number of genera which appear to have evolved on Sulawesi: that is, distinctive groups of species not closely related to any other. Most remarkable of these endemic genera is the wild pig *Babirusa*.

All these have a distinctly—though distantly—Asian look about them: their closest relatives are always to be found in Asia, though in some cases the only species at all closely related to them are fossils from the Siwaliks. There is only one striking exception: Sulawesi has two species of Cuscus (*Phalanger*), marsupials which have their centre of diversity in New Guinea, and Sulawesi is in fact their furthest western outpost. But this is the only real link with the New Guinea/Australia region: in almost all other cases the mammals, unique though they are, have their ultimate roots in Asia.



*Above: An adult male Black 'Ape' with canines drawn; below: two captive specimens of a special Black 'Ape' (*Macaca nigra nigrescens*) found on the northern peninsula between Gorontalo and Imandi.*



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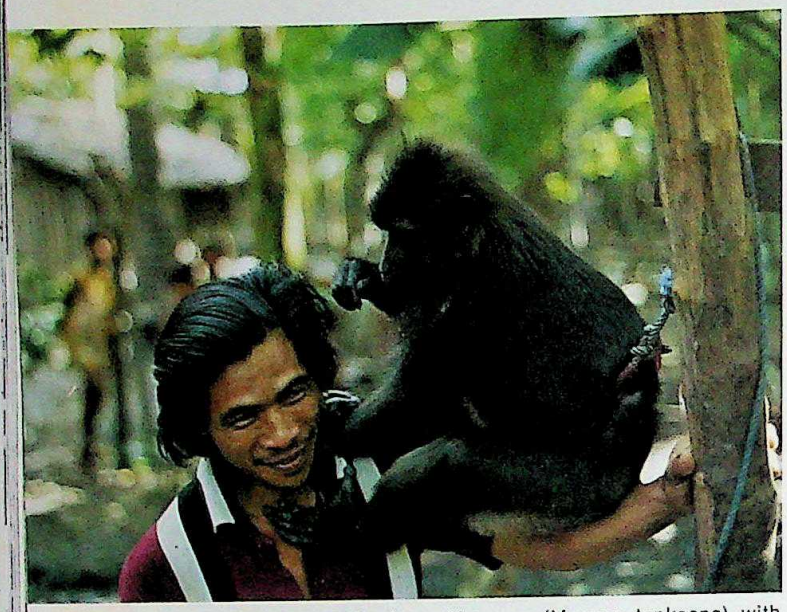

A young male pet Tonkean Macaque (Macaca tonkeana) *with his owner.*

Members of a troop of Moor Monkeys (Macaca maura) *surprised in open bush, Maiwa, South Sulawesi, and below, a young male Celebes Giant Rat* (Rattus dominator) *in Guy Musser's camp.*

My wife and I spent ten weeks in Sulawesi to ascer by field work the exact number of species of mon living there: anything from one to seven had been allo by previous investigators. We found that four could recognised: different species do not interbreed in the (though they can be crossed in captivity), and we able to show that in some cases, two of the puta species were interbreeding where their ranges met that some monkeys were intermediate between the while others' ranges met without any intermixture.

The most distinctive of the four species is *Macaca nig* the so-called Celebes Black Ape—'ape' because it almost no tail. This species is restricted to the north peninsula of the island, eastward from Gorontalo; it black, or nearly so, with a long doglike muzzle and backwardly pointing crest of hair on the head. We saw in large troops, about thirty strong, in the G. Tangkok Batuangus reserve in Minahasa. It is a good-natur animal, easy to handle and responsive to human ca when kept as a pet, which it often is in towns and village Near Gorontalo, its range meets that of the jet-bla Tonkean Monkey, *Macaca tonkeana*, distinguished by broad face and the short upstanding crest on the cro This species is found not only on the western half of northern peninsula but throughout the mountains of centre of the island. In South Sulawesi, at the foot of Toraja Highlands, its range meets that of the Moor Monk *Macaca maura*, which is smaller, with no crest, and m often brown than black. Finally, in the south-eastern pe sula is found the Ashy-black Monkey, *Macaca ochrea* black with grey arms and legs; a species we did not s in the wild, but from its overall likeness to the M Monkey we think it probably does not interbreed with Tonkean Monkey whose range abuts on its own.

The fact that these four monkeys replace each othe different parts of the island is interesting. Looking at a m of Sulawesi, with its four spindly arms, one might th that at the root of each arm there would be a gen bottleneck, so that distinctive species or races would t to evolve on each arm. One would think so; but in fac turns out that the monkey situation is not a very freq one. More usually the mammals of Sulawesi vary, geographically, but with altitude. This rather surpri situation was made quite clear to us by our old fri Guy Musser, a zoologist from New York who spent th full years in the centre of Sulawesi studying the fa especially the rodents. Having pleasant memories of g fellowship and common interests when we had met be in New York or London, we were delighted to stay him at his camp near Malakosa, on the Gulf of To near the end of his marathon. There he showed us s of the results of his work: trapping rats at different el tions, from sea level to the summit of G. Nokilolak two thousand, three hundred and fifty-five metres highest peak in Sulawesi, he had found again and a that a species in the lowland forests was replaced close relative higher above, this in turn sometimes

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replaced by a third related species higher still. This happens not only with rats, but with squirrels, (the endemic genus *Prosciurillus*); and he had observed it with larger mammals, too. I had myself concluded, after studying museum specimens of the Celebes Dwarf Buffalo or Anoa, that there were two species separated by altitude; and now it all fell into place. Some species did not show this restriction, but trotted up and down mountains with abandon—like the monkeys; but mostly they were restricted by altitude and were otherwise almost the same all over the island from Manado to Macassar.

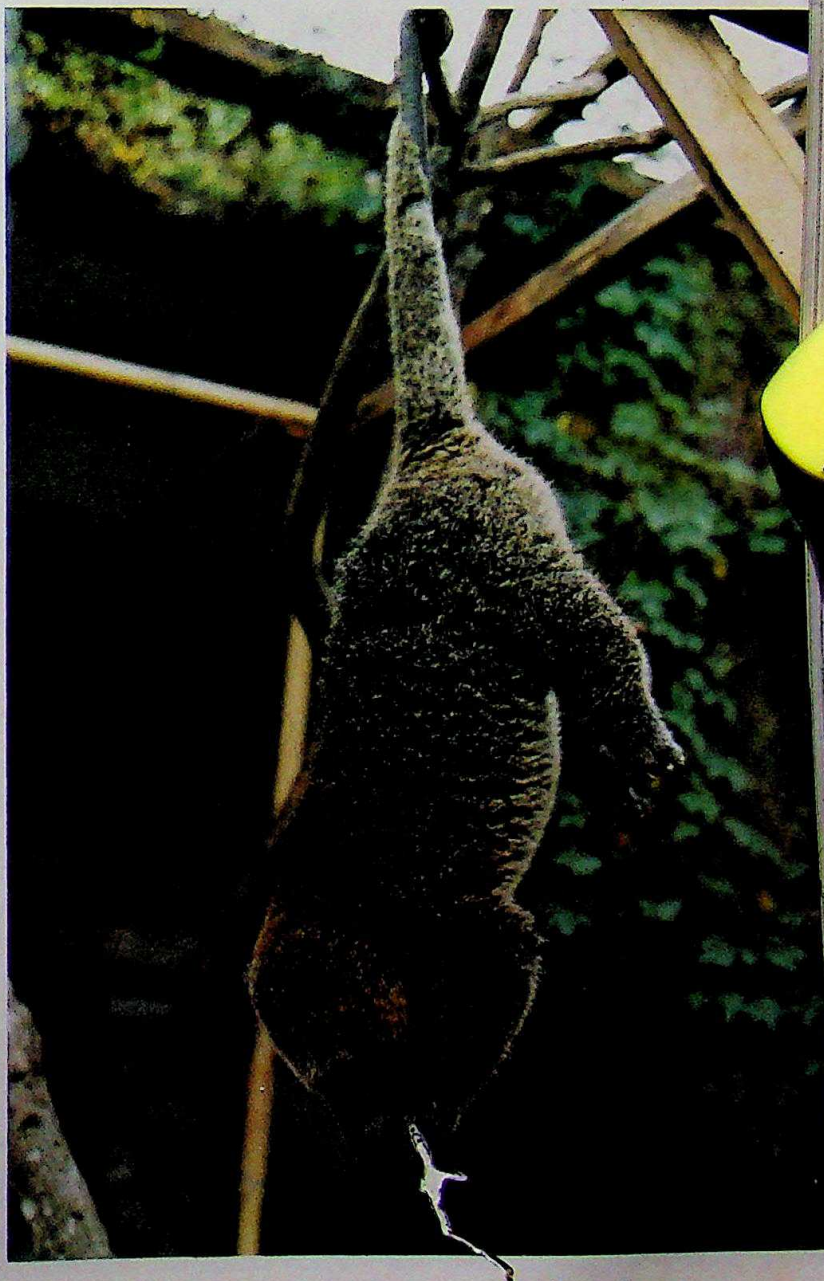
Many of these rats are not at all offensive, but rather delightful creatures which quickly become tame. They range in size from the Giant Rat, *Rattus dominator*, with a head-and-body length of twenty-five centimetres (and the same again for the tail) to very small species of less than mouse-size; the texture of the fur ranges from spiny to soft and velvety, the larger species have white-ended tails. None of them lives near human habitations, but all keep strictly to the forest; the non-Muslim peoples catch and eat the larger wild rats—as they do most of the wild animals, even monkeys.

Of course, there are also commensal rats in Sulawesi: but they are all of the widespread species, five in number, which have been transported here and there by accident on ships, and wreak havoc, eating crops and spreading disease wherever they go. The five are the Black Rat (*Rattus rattus*), which climbs well and is often found breeding up in the rafters; the Brown Rat (*Rattus norvegicus*), larger and with white feet, more of a seaport species; the Ricefield Rat (*Rattus argentiventer*) which, as its name suggests, lives in the *sawah* and does not come into houses. It is spread throughout South-East Asia and as far east as New Guinea; the Polynesian Rat (*Rattus exulans*), a small species which replaces the others on most Pacific islands and has been recorded in northern Australia; and the rarer Himalayan Rat (*Rattus nitidus*) which seems to favour highland localities as around Lake Lindu in Sulawesi. These are the ugly ones, the Filthy Five, the dreadful pests which together with the house-mouse seem to be an inevitable accompaniment to human settlement in this part of the world.

Some of the other rodents in Sulawesi are most interesting animals. The tiny Tree-rat (*Haeromys minahassae*); the Shrew-rat (*Echiothrix leucura*), which eats earthworms, holding them in its pincer-like front teeth; the three unique species of Shrew-mice, restricted to the moss forests at the tops of the central mountains; the variety of squirrels, all remarkably different from those of the Greater Sunda islands. Many of them were being kept alive by Guy at his camp; and during his three years he had discovered a number of quite new species.

Forty-six species of bats inhabit Sulawesi; as bats fly, one might expect them all to be of more widespread species, and some indeed are; but a great many are, like the ground-living mammals, unique to the island.

A Celebes Shrew Rat (Echiothrix leucura), *one of the many mammals with no close relatives outside Celebes, and, below, a pet Cuscus (*Phalanger ursinus*) the most westerly of all marsupials. Like the related possums of Australia, they have prehensile tails.*



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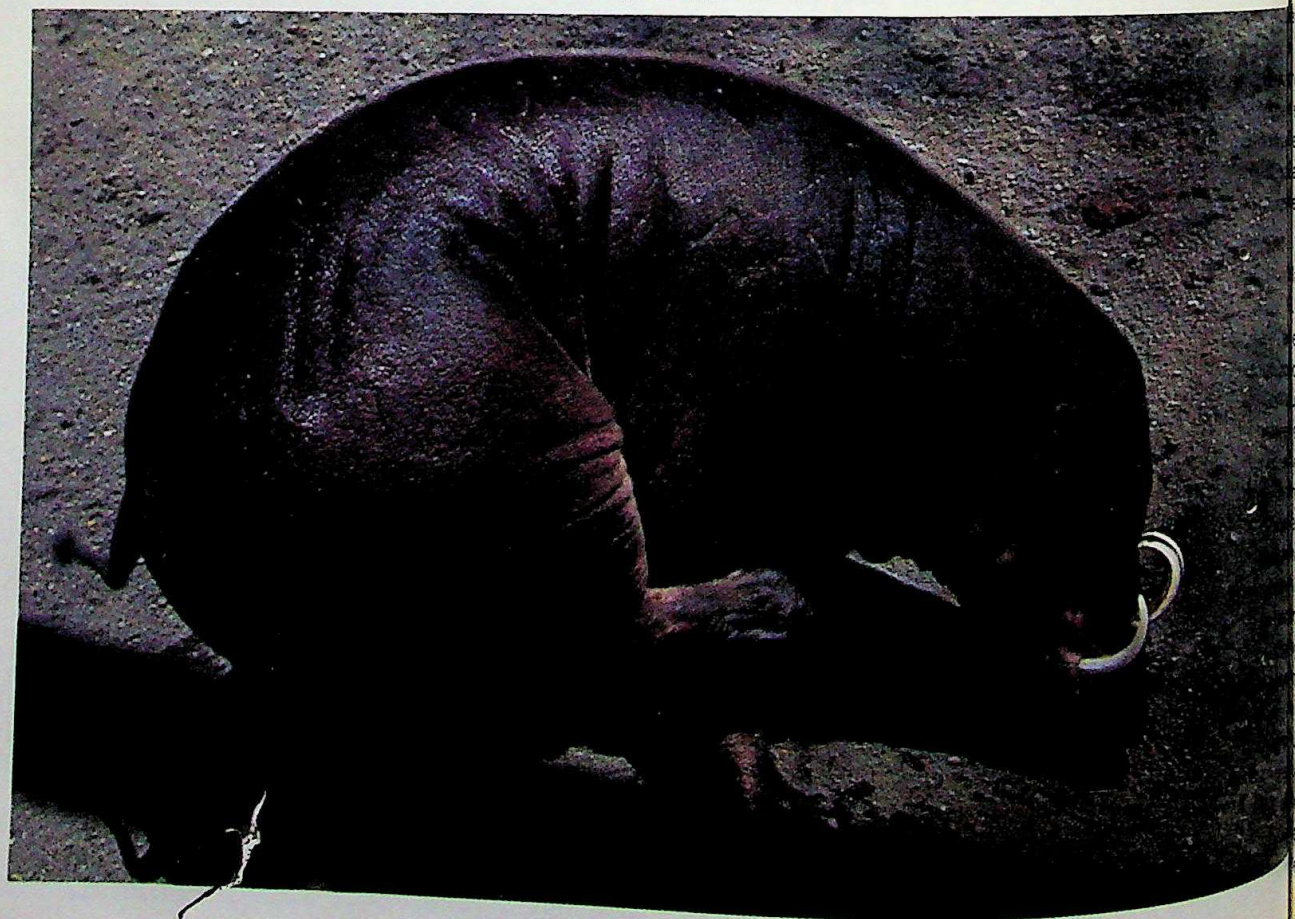
Above: A mountain Anoa (Bubalus quarlesi) *in the Surabaya Zoo, one of the unique dwarf buffaloes of Sulawesi; below: the pig-animal, Babirusa* (Babyrousa babirussa) *of Sulawesi. The male has two pairs of tusks; those in the upper jaw emerge thro the snout.*



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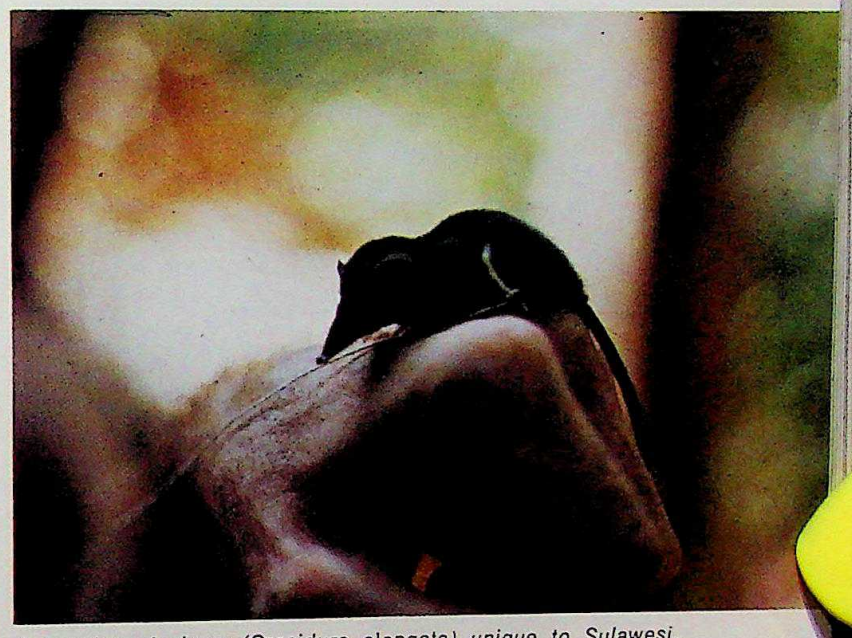
The peculiar Tarsier (*Tarsius spectrum*) is an inhabitant the lowland forests, and there is a suspicion that there ght be a second species living at higher altitudes. s little primate, half way to being a monkey, with its g hind legs and enormous eyes, comes out at dusk and n, and feeds on insects and lizards. It has a pungent our, and is smelt more often than seen. Different species arsiers live in Borneo and in the Philippines.

The larger species of Cuscus (*Phalanger ursinus*) can seen by day curled up at the tops of trees. It wakes up ards evening. Its long prehensile tail and convergent gers give it a primate-like aspect in some ways. The aller, lighter-coloured *Phalanger celebensis* is more ctly nocturnal, and we never saw it.

There is a small species of wild pig, *Sus celebensis*, own as 'babi biasa', very common and in some places agricultural pest; and much less common, very dis- ly related to other pigs, the Babirusa (*Babyrousa* byrussa). Although its name means 'pig-deer' it is not, course, a deer, but the incredible form of the male's sks make it look as if it has horns. The upper tusks are turned, and emerge through the skin of the snout to ve back and round in a spiral; the lower tusks are ch the same shape and sit in front of the upper ones. tainly, the female has no tusks. What the tusks are for s never been satisfactorily explained; Tonsea hunters d one European visitor in the last century that the male birusa hangs itself up by them on a branch, to wait for female to come by. Alas, the Babirusa makes good ing and, though locally common enough, is sporadic its occurrence; it will need to be much more strictly tected in the future if it is to survive. Already it has ppeared from the southern arm, south of the Tempe pression (about a hundred kilometres north of Ujung ndang, formerly Macassar), although prehistoric cave posits contain quite late remains.

The Dwarf Buffalo or Anoa is still found all over the nd, though in the south probably restricted to the Lompobatang region. There are two species: one in e lowlands (*Bubalus depressicornis*) and one in the untains (*B. quarlesi*). Compared to the placid water- falo they are very small—height about eighty-six centi- tres for the lowland species, seventy centimetres for e mountain one—with short, backwardly directed horns: d appallingly evil-tempered, or so it seems. A pair at rtama zoo tried to spear us with their diminutive horns rough the wire netting; a pair tethered outside the litary commander's office in Ujung Pandang ceased cking the moment they spied us and advanced menac- ly; and indeed they have the reputation of being ossible to cage with any other animal, and dangerous hunt. Nonetheless they are hunted, not only by ther-gatherer peoples of the Poso district, who use ir skins for bags, but purely for excitement, and for pot, by all and sundry. Hunting the Anoa — or the byrussa, or any Celebes monkey — is supposed to be feat; but nobody in Sulawesi appears to have even

Never photographed alive, this is the Amsterdam Institute for Taxonomics Zoology specimen of the Celebes Giant Civet (Macrogalidia musschenbroeki).



*A species of shrew (*Crocidura elongata*) unique to Sulawesi, and, below, a Celebes Hornbill (*Rhyticeros cassidix*) basking in the sunshine in the G. Tangkoko-Batuangus Reserve, North Sulawesi.*

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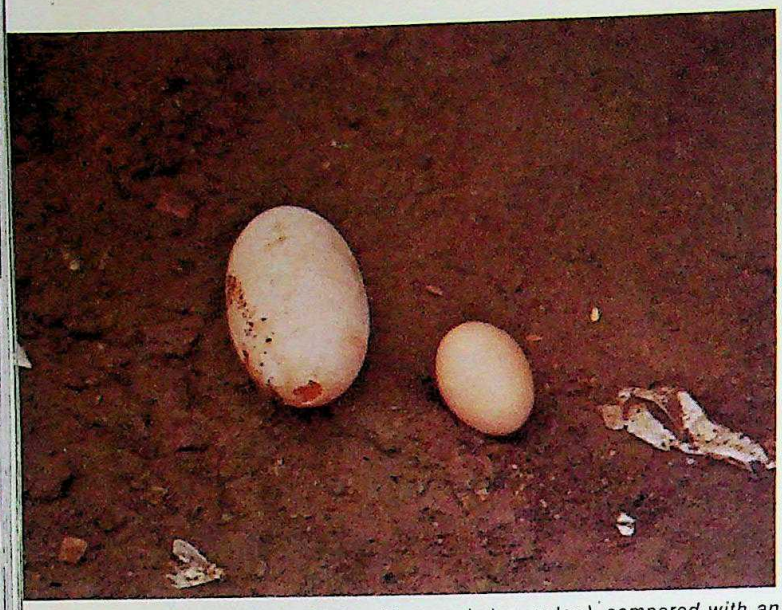
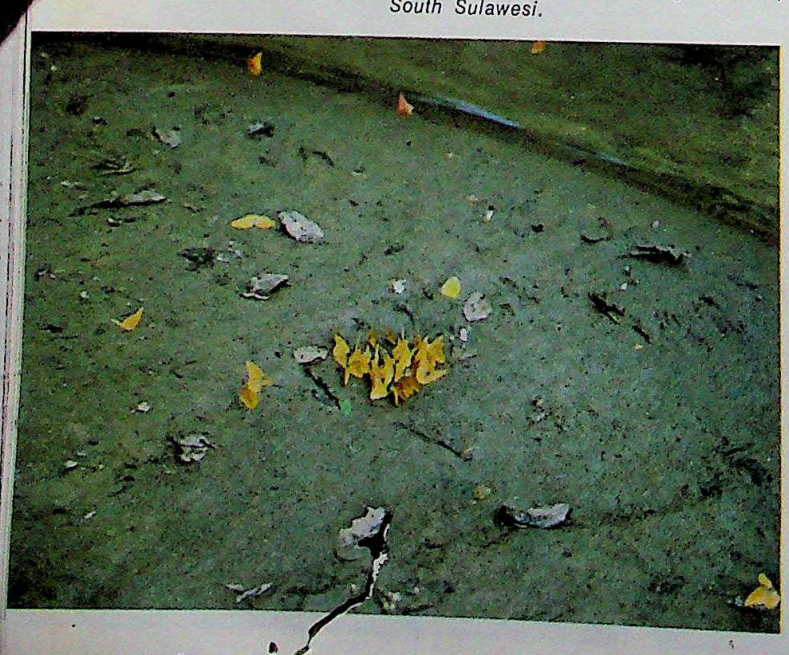


*The egg of the Maleo (*Megacephalon maleo*), compared with an ordinary hen's egg.*

*A Celebes Rainbow Fish (*Telmatherina ladigesi*) and, below, butterflies feeding from mineral soil in Batimurung Reserve, South Sulawesi.*



heard of the wild life protection laws promulgated Jakarta.

After various traumatic experiences with Anoas, it most unexpected to find a very tame one kept as a in Palu. Its temperament was as docile as a sheep's, it would sit, lie down and stand up on command.

There is only one indigenous carnivore on Sulawe among the mammals: a very rare and beautiful creat the Giant Palm-Civet (*Macrogalidia musschenbroe* Despite its common name, it is a very different ani from the ordinary Palm-Civet (which is common as a ta rat-catcher throughout Indonesia, and introduced on S wesi as well). It has a head-and-body length of about metre, with a long tail; large teeth and a heavy muzz and is a handsome golden-brown colour with hin brown spots. We asked all over Sulawesi for informa about it, but people seemed mostly to be describing Palm-Civet or the common Malay Civet, also introduc when we enquired about 'musang'; and Guy Musser s it only once in all his three years there, in the highla of the centre.

Of course, when one enters a forest on Sulawesi, ve few mammals—monkeys excepted—make their presen felt. When one has ceased to wonder at the giant trees, the towering ebony trees, and the other forest pla the birds become noticeable. Most in evidence are hornbills (*Rhyticeros cassidix*), common all over the isla and, inevitably, of a species unique to it. They often att attention by their heavy, noisy take-off and the whir sound as they fly; or one may be seen lazily sunning on a branch, head to one side and the sunlight shi through the red translucent casque on its bill.

Characteristic of many forest regions is the Ma (*Megacephalon maleo*), related to the Brush Turk Mallee Fowl and Mound-building birds of the South- Asian and Pacific regions—but this one digs an enorm hole in the ground instead of building a mound, and this is laid its huge egg. The bird itself is the size o chicken, but the egg makes six omelets. Several ar are known as places of high concentrations of the bi and the nests are mercilessly plundered for the eg We never saw the bird, but heard its deep, startling echoing through the forest.

In Alfred Russell Wallace's day, two hundred and bird species were known from Sulawesi, and of th one hundred and twenty-eight were 'land birds': hundred and eight being almost or completely con to the island. This conclusion is unchanged even to birds, like mammals, show very high endemicity rates Sulawesi. Again, Wallace remarked that eighteen ou twenty-four species of Papilionidae (Swallow-tailed bu flies) on Sulawesi are peculiar to it, compared to two of twenty-nine on Borneo; and almost every group animals—vertebrate or invertebrate—shows somethin this. Even the fish: peculiar to the south arm, for exam

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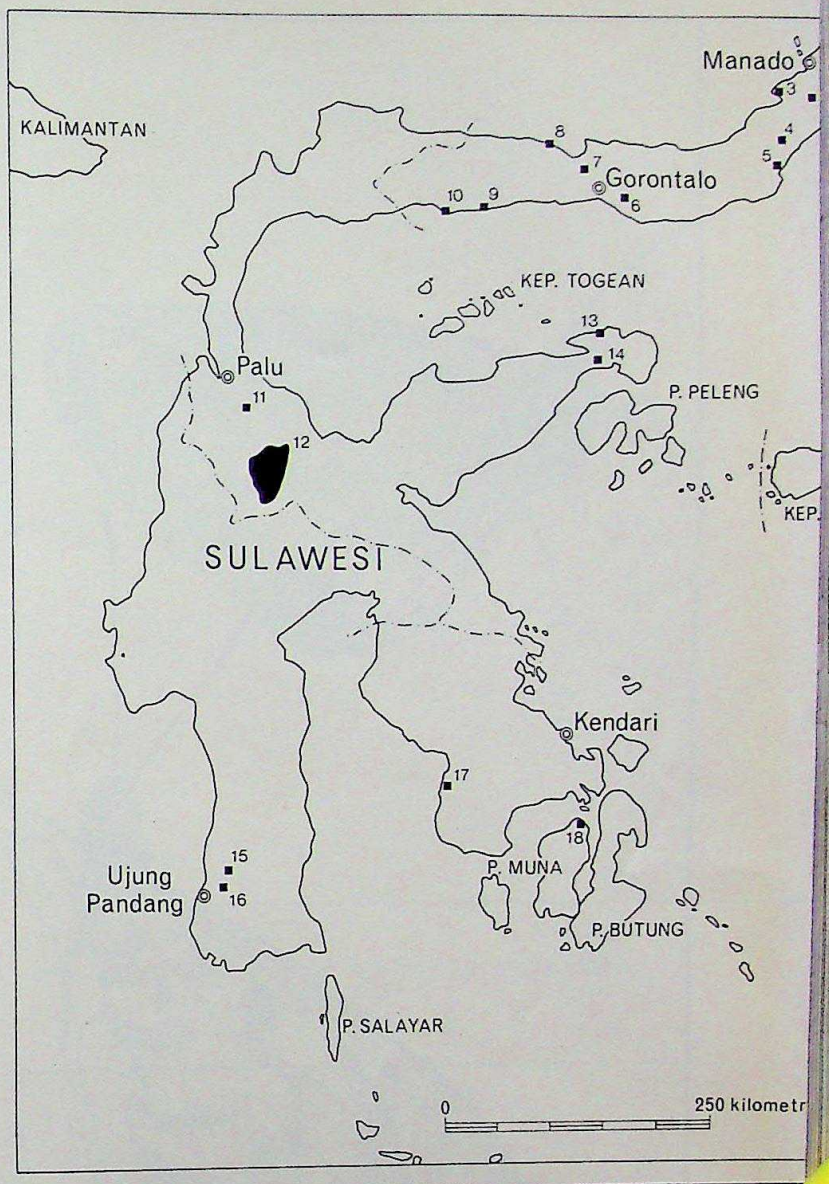
is the Celebes Rainbow Fish (*Telmatherina ladigesi*), a very distinctive atherinid.

So the wild life of Sulawesi is unique. The question must be asked: has it a future? The map shows eighteen reserves. Some are total Nature Reserves (Cagar Alam), some designated Game Sanctuaries (Suaka Margasatwa). All are posted, patrolled and overseen, but there are many drawbacks: the number of guards is too small, the public is not really aware of what their significance is, and the laws regarding them are easily evaded. Nonetheless, they are a start, and can be regarded as forming the nuclei of larger, more meaningful conservation units. Larger they will have to be: the tiny reserve of C.a. Tangale, near Gorontalo, presided over by a single ranger, encloses about a hundred hectares—probably less than the home range of a single Anoa. On the other hand others, like Lore Kalamanta, are enormous and fully adequate to the task. Some, though small, are specialised, like Bantimurung, which is scenically beautiful and contains gorgeous butterflies; this was one of Wallace's collecting posts — and so fulfil their purpose that way. Moreover, there is increasing interest in Indonesia in the preservation of the country's rich fauna; the new head of PPA (*Pengewetan dan Perlindungan Alam*), Mr Prijono, has revitalised his office since taking charge three years ago, and money and assistance from foreign sources are beginning to pour in once more, this time under the auspices of a United Nations Development Plan.

This is not to say that all will be plain sailing from here on. Indonesia's population problem has not been solved: more people need more land, and so there is pressure on the borders of some of the reserves. It is becoming clear that Sulawesi is nearing the end of its useful life as a transmigration area; most of the forests of the southern arm have yielded to *sawah* cultivation, and those of Minahasa to coconut plantations. Increasing population is shortening the swidden cycles in the Gorontalo region; the same can be expected to occur before long in the mountains behind Palu, although for the moment forests remain predominant here. Transmigrants, bringing with them alien cultivation techniques, have caused far more deforestation in the coastal regions of the Gulf of Tomini than indigenous peoples ever did. Well, the problem remains: the ultimate threat to so much that is valuable in Indonesia—its towns and traditional life-styles as well as its scenery and wildlife. Fortunately the government is aware of it and has begun a concerted attack on the problem, and it can now be confidently expected that the conservation program will go forward. There is nothing like Sulawesi anywhere else: a unique array of little-known animals, a world of its own with, there is now every reason to hope, a viable future of its own.

Dr Colin Groves is a Senior Lecturer in the Department of Prehistory and Anthropology at the Australian National University, Canberra.



MAP: SULAWESI AND ITS NATURE RESERVES

Name of Reserve	Type*	Area (ha)	Special features
Prop. SULAWESI UTARA			
1. G. Tangkoko-Batuangus	C.a.	4,446	Extinct volcano; monkey; babirusa anoa; hornbill; maleo
2. G. Lokon	C.a.	100	Volcano
3. Manembo-nembo	S.m.	6,500	Babirusa
4. G. Ambang	S.m.	8,638	General fauna
5. Molobok	S.m.	1,000	Maleo
6. Bone	S.m.	15,000	Anoa; babirusa
7. Tanggala	C.a.	125	Scenic
8. Mas Popaya Raja	C.a.	160	Turtles
9. Panua	C.a.	1,500	Maleo
10. Tanjung Panjang	S.m.	2,000	Maleo
Prop. SULAWESI TENGAH			
11. Paboya	C.a.	1,000	Botanic
12. Lore Kalamanta	S.m.	131,000	Full complement of Sulawesi fauna
13. Pati-pati	C.a.	198	General fauna
14. Lamboyan	S.m.	3,665	General fauna
Prop. SULAWESI SELATAN			
15. Karaenta	C.a.	1,000	Botanic; monkey; hornbill; butter
16. Bantimurung	C.a.	10	Scenic; caves; butterflies
Prop. SULAWESI TENGGARA			
17. Lomedae	C.a.	500	Botanic
18. Napabalano	C.a.	9	Scenic

*c.a. (Cagar Alam) = Strict nature reserve
s.m. (Suaka Margasatwa) = Wildlife reserve

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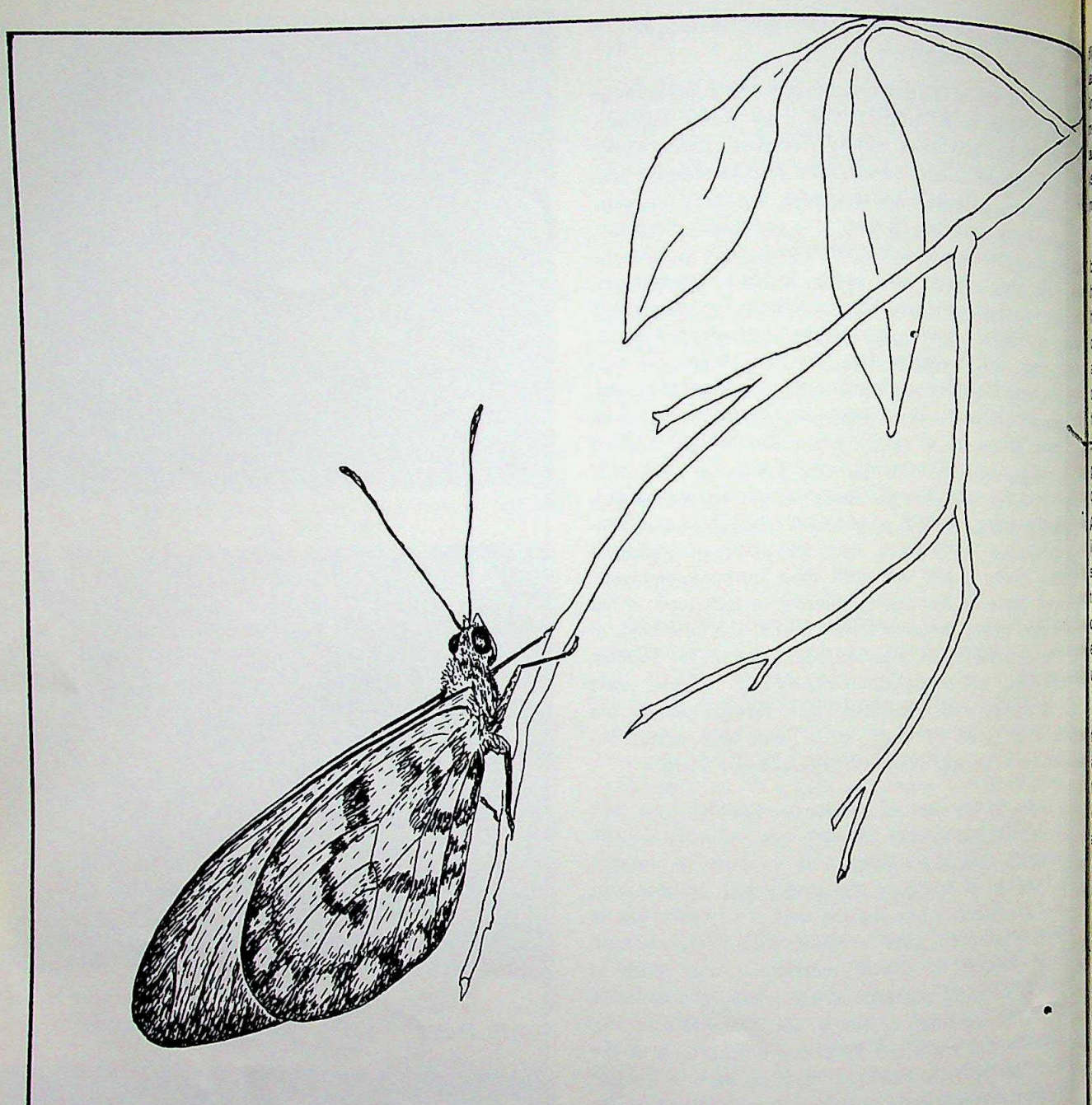

A butterfly at rest (Acraea andromacha andromacha).

DARKNESS, NO DARKNESS

Article and illustrations by Peter Wilso

SUNSET brings a hush to the Australian bushland. As the wind drops and the light fades, the animals of the day silently seek out niches in which they can safely pass the night, while the animals of the night begin to rouse themselves in preparation for the coming hours of activity. In summer even the ubiquitous free-ranging, day-flying insects disappear at dusk. Some may fly about t a time in the twilight, particularly if the day is hot, befo settling for the night.

We can learn a lot by following the movements one of these insects just before sunset. *Eurema hecab phoebus*, for example, is a small butterfly which normal

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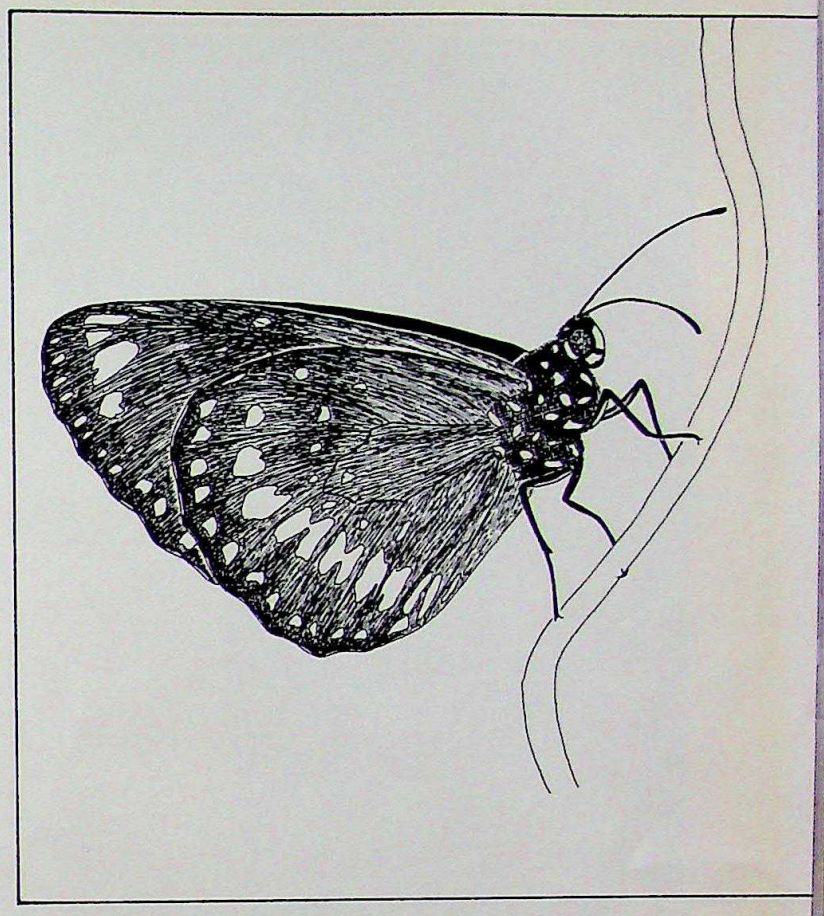
flies so quickly and erratically in the sunshine that it gives an observer little chance of looking at it closely. Found in open areas over much of eastern and northern Australia, north from the Sydney area, it is bright yellow and has a wing span of about forty-five millimetres. The species is found in Australia, most of South-East Asia, and as far north as India and Japan.

E. hecabe phoebus does not fly high like some other butterflies, but flutters steadfastly along just above grass height. As darkness sets it slows in its movements, hovering about shrubs instead of flying past them. If a cloud blocks the sun the butterfly will readily alight for a time on a nearby leaf or grass blade, giving an observer the chance to follow its movements on foot. The butterfly's seemingly random wanderings cease at sunset, when it finds a place of rest that will give it some degree of protection from insectivorous marsupials, reptiles and other animals. It does this instinctively. Often *E. hecabe phoebus* will alight on a low shrub, if one is available, in preference to grass or a tree. It may flutter about the shrub for a few minutes, flying into and out of gaps in the foliage, before finally hovering near a leaf it has chosen and then alighting. When it alights it grips the edge of the leaf with its legs and swings downward under its own weight so that it hangs upside-down.

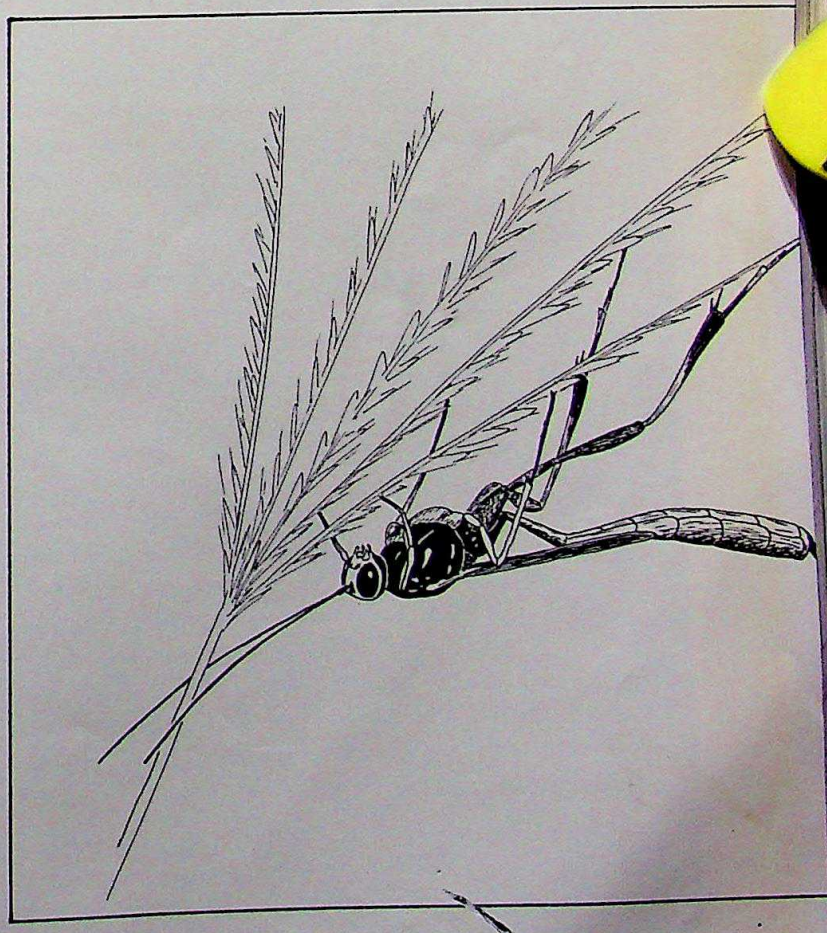
Usually the sky is still quite light when the butterfly first settles, and it will often rouse after a few minutes and flutter slowly away in search of another shrub, sometimes to return to the original one, sometimes not. (An observer should therefore not be too eager to approach a butterfly at this early stage lest it fly away). With encroaching darkness, the butterfly becomes more reluctant to leave its chosen leaf, and once darkness falls it will not leave. An observer can approach the resting butterfly with a torch and study it. He may even be able to pass a hand between the leaf and the butterfly so that the butterfly accepts his hand as a support instead of the leaf. While the time of day at which the butterfly settles and the vigour of its flight will vary with season and locality, its resting behaviour is always the same.

When *E. hecabe phoebus* hangs from a leaf, with inconspicuous legs and body scarcely projecting beyond the edges of its wings, it looks almost like a faded yellow leaf caught in the foliage while falling to the ground. If dead and dying leaves are present in the shrub, the butterfly may be quite difficult to see even though the path of its flight has been keenly followed. Camouflaged to some extent in this way, it probably escapes the attention of any birds feeding at dusk and dawn.

E. hecabe phoebus and other day-flying butterflies, and indeed other day-flying insects, generally make little attempt to escape from danger at night because they apparently cannot see well in the dark. A butterfly illuminated by torchlight may start once or twice in fear, but make no attempt to fly unless provoked. If it does fly,



A butterfly resting (Euploea core corinna), *and a* Libellulid *dragonfly.*



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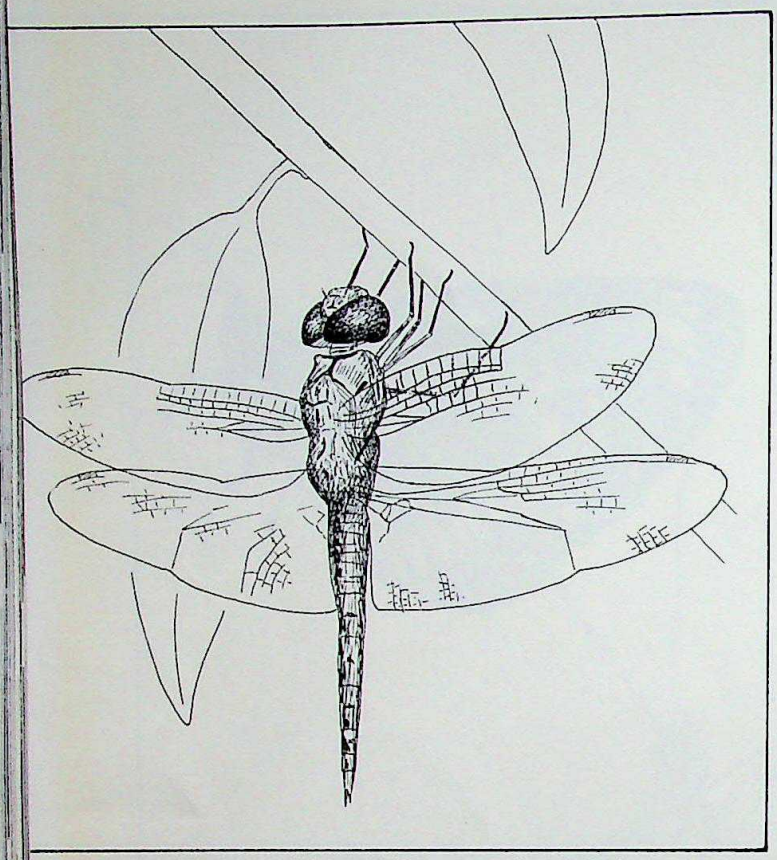

Ichneumonid *wasp resting at dusk.*

it usually flutters downward until it hits the ground or some other object and remains there until morning.

Not all butterflies hang from leaves during the night. The large nymphalid butterfly *Euploea core corinna,* for example, will seek out bare twigs or vines well separated from leaves and bark and rest with its body nearly vertical so that the wings point to the side. It is very difficult to locate a butterfly in this position by torchlight because the dark-brown undersides of its wings merge with the surrounding darkness; an observer's eyes tend to seek out substantial masses such as foliage and tree-trunks and to overlook flimsy twigs and vines. Perhaps the eyes of the predators are tricked in the same way. The nymphalid *Acraea andromacha andromacha,* the only Australian species of the sub-family Acraeinae, also shows a preference for bare twigs, but its silvery-grey wings, held back-to-back over the body like those of *Euploea core corinna,* are more easily seen. At a casual glance, however, the butterfly looks like a twig's last remaining dead leaf. *Acraea andromacha andromacha* and *Euploea core corinna* usually rest much further from the ground than *Eurema hecabe phoebus.* Often they rest so high on trees that they simply cannot be reached. *Acraea andromacha andromacha* slows earlier than the other two, often beginning to settle on trees an hour or two before sunset.

The movements of day-flying insects other than butterflies are less easily followed because they are not so conspicuous, but much the same pattern of behavio occurs with them all. Dragonflies hang vertically do wards from leaves and twigs or hold their bodies ho zontal while clinging to a firm support such as a bran (Those dragonflies that spend the day flying over pon and streams disperse into the surrounding vegetation dusk.) Flies alight on any leaf, twig, tree-trunk or gra blade they can find. Bees and wasps rest in a variety positions.

An inspection of the foliage of a tree at dusk wou reveal the variety of insects settled there. Many fli settle on the outer leaves and are easily seen. Butterfli may be anywhere: sometimes on the outer leaves, som times deep within the foliage near the trunk. Gras frequenting skipper butterflies will often be found restin on leaves at the very top of the tree. Dragonflies m hang from the lowest sprays of leaves and be foun there silhouetted against the western sky.

An open area of grassland, especially if it is near forest, provides good resting places for insects. A myria flies, butterflies, bees and wasps settle on the gras blades, stems and heads between dusk and nightfal Of special interest are the bees and wasps, of whic many species seen at dusk may be difficult to find durin the day. Many sawflies, for example, are rarely seen b day, but come to grass to pass the night. Like butterflie diurnal bees and wasps, when at rest, adopt body position which are characteristic of the particular species. One wa species may always hang upside-down, another may cl to a grass stem from the side so as to hold its bod vertical.

Anthophorid bees of the genus *Thyreus* typically re on grass by first hovering about the chosen stem a then gripping it so tightly in their mandibles that th are able to hold their body horizontal, a position th maintain all night. Anthophorid bees of the genus *Amegi* typically rest in a similar manner, gripping a grass ste tightly in their mandibles, but letting their bodies han downwards. *Amegilla,* and indeed many other insec including some species of butterflies, often congregat at dusk to pass the night together. *Amegilla,* the first bee arrives as the light begins to fail rapidly. After hoverin about several different grass stems or twigs, this inse finally selects one and grips it with its mandibles w no assistance at all from its legs. A few seconds la another bee appears, hovers about the same stem a then alights a centimetre or so from the first bee. Mo bees arrive, and one by one they position themselve along the stem until perhaps a dozen of them a arranged in single file. Other bees begin to settle o adjacent stems. Some may contest the more favour positions at the ends of stems, harassing the occupier hovering very near, but usually being repulsed eventua by six-legged defensive thrusts. This gregarious behavio

Opposite: Eurema hecabe phoebus *butterfly at night.*

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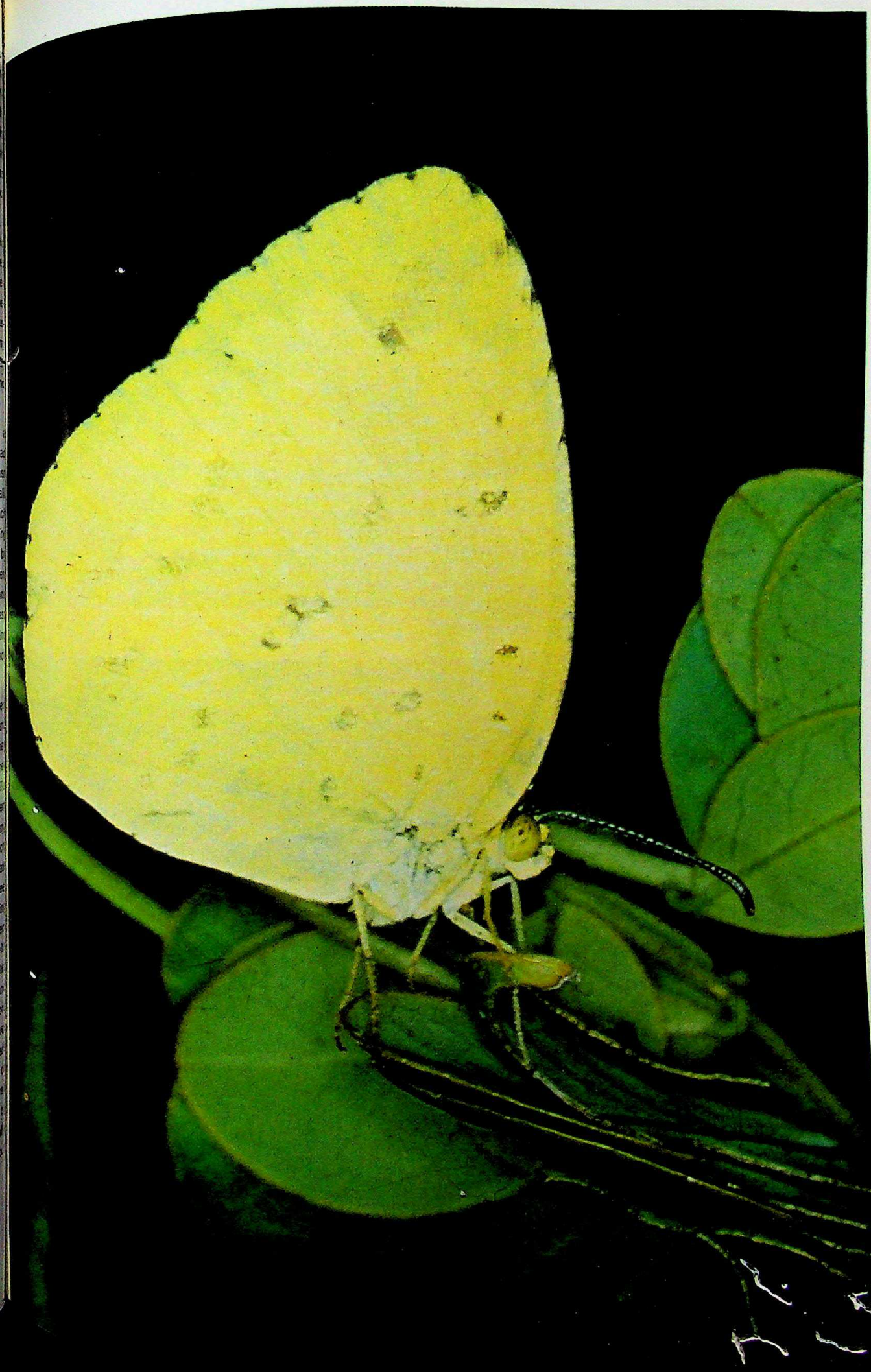

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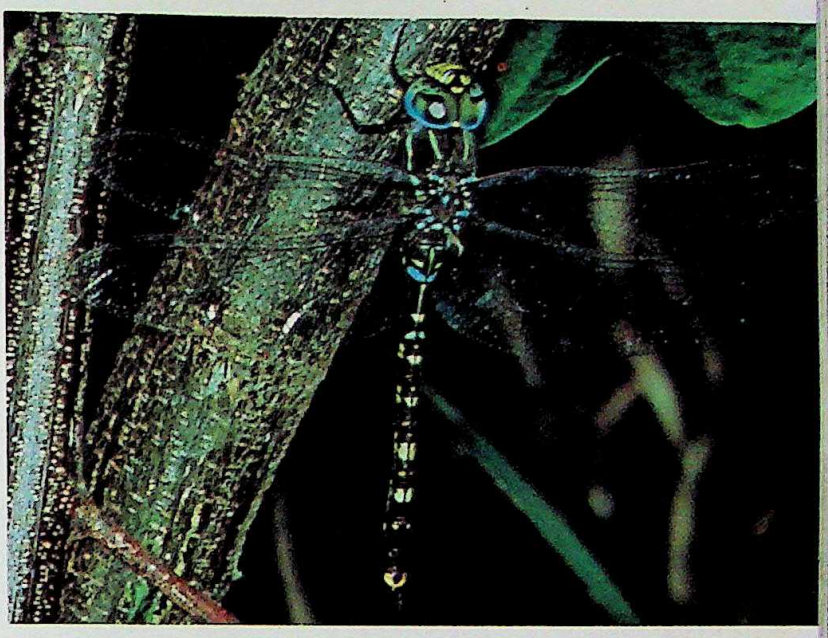
may be linked with the bees' nesting behaviour, for they often dig their burrows in close proximity. Apparently gregarious behaviour in many other insects is often simply the result of a group of males being attracted to a female. (It is interesting to note that bees of the genus *Thyreus* do not build nests. They are social parasites, and *Amegilla* are their hosts. The *Thyreus* larva destroys the host egg or larva and lives on its food supply).

Flies, dragonflies, bees and wasps are just as helpless at night as the butterflies, although the wasps, at least, can often sting in defence. Some insects can fly at night, but they soon collide with unseen objects. Dragonflies seem totally unable to fly at night; when nudged from their support they flutter and fall straight to the ground, where they flounder helplessly, often upside-down. No matter how well a day-flying insect chooses its resting place at dusk, it is always subject to the perils of bad weather. Wind can unseat it, hail can cause death.

Inconspicuous because of size, often elusive because of speed, often despised through familiarity with the unwelcome habits of a few, many insects reveal their quaintness and beauty only at sunset.

The author, who lives in Canberra, is a spare-time naturalist, and has published a richly-illustrated book with Nelson: *The Living Bush*. It is rightly called 'A Naturalist's Guide', and has photographs and sketches, not only of the living creatures themselves, or only of winged insects, but also of lizard tracks and turtles, rare flowers, and animals that glide from tree to tree in the Australian bush.

The Living Bush is authoritative, but makes lively reading for the person whose knowledge of the bush is not from book or scientific bench; it is for anyone who wants to know more of what happens just beyond the fringes of the towns—or, in some instances, in some precincts of the towns themselves. The ISBN Number of the work published by Nelson is 0 17 005147 1.— Editor.



Left, above: Anthophorid bee (Thyreus sp.) *at rest; below,* Hesperiid butterfly (Trapezites symmomus symmomus).

Right, above: Dragonfly *resting on the stem of a shrub.* Below: Pierid butterfly (Anaphaeis java teutonia).

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THE ISLAND THE GODS REMEMBER

FEW places in the world with a population of a couple of million have evolved complex and unique ways of living: two examples would be ancient Greece and the island of Bali.

The Balinese have borrowed and adapted and made the religions and the arts of others into something that is purely Balinese.

This total fusion of objects of beauty and human creation with all living makes welcome a book such as one recently put out by Oxford University Press (ISBN 0 19 211445-X). It is the work of a gifted Swiss scholar, Dr Urs Ramseyer, who did ethnology, sociology and music at Basel University, and then went on to the Ecole Pratique des Hautes Etudes and the famous Collège de France. For ten years now he has been Keeper of the Indonesian Department at the Basel Museum of Ethnography—itself a microcosm of learning and artefacts so rich that most people would be astonished to find it in a country half the size of Tasmania.

The work is written with comprehension and with respect for the people and works of art and the customs dealt with; the text, though amply detailed, is accessible to the general reader, and admirably complemented by photographs which are not at all of the poster-Bali.

Unlike Westerners and many peoples, the Balinese don't talk about art—in fact, they have no real name for it. Art is something you just do as a part of daily life in work and in worship. A good deal of if, of course, is meant to be seen and enjoyed by others, but some is so discreet that only the owner and builder of a house would know that high on the gable was a roof-tile decorated with a figure dedicated to Dewi Sri, goddess of rice, earth-mother . . .

The author of the book under review puts it this way:

The production of art in the traditional sense is social behaviour which is expected and sanctioned on various levels of the social system. Art is produced either individually or in groups, but always at the request of society (masyarakat), that is, various social organisations and associations. The basis for the collective production of art is the system of mutual solidarity and assistance in solving social and economic problems, known in Indonesian as gotong royong.

In other words, the arts are as much a part of the way of life of a Balinese as the pub is to the Australian.

The artistic and religious isolation of Bali is the more astonishing when one realises that for centuries about which little detail is known, Bali was under Javanese rule, with some interruptions, until, in 1343, the Majapahit empire, the last of the Hindu-Javanese empires, took control until itself crumbled and Islam replaced the Hindu influence in Java, although the latter religion has been preserved in Bali—with some alterations—and is known as Bali-Hindu. And then came the Dutch.

It is hoped that Bali can withstand the present wave of tourism as it has gone its own way in the past. Urs Ramseyer points out one aspect of this:

Pura Danu, a temple on Lake Bratan. The temple is a centre of worship for many irrigation societies in the region. These societies control the water flow for wet rice cultivation, for which the lake is a kind of natural storage tank.

Balinese statues of gods were never created as objects of worship; they were intended as formal and aesthetically pleasing repositories for invisible souls or for purely decorative purposes. Thus the countless statues of gods and mythological heroes that adorn Balinese temples are not identical with the invisible main deities. It is doubtless this view that later allowed the purely decorative art of Majapahit to develop and become Balinized to such a great extent. On the other hand it also formed the basis for the evolution of a complex art of offerings to which music, dance and theatre also belong.

In addition to this — the gods must be invited to come down from their dwellings above Gunung Agung, the sacred mountain, either to their own statues or to ceremonies—much of Balinese art is ephemeral: for one thing, the volcanic tuff of which many of the statues are made crumbles relatively quickly; (the animal sacrifices are eaten by the public, anyway); the decorations of temple offerings are made of materials which, especially in a tropical climate, cannot last long; the delicately crafted sarcophagi in which the dead lie are burnt during cremations; the figures cut with watchmaker-like precision from lontar palm leaves must crumble in a short time. All this contrasts with Borobudur, Angkor, the pyramids, Christian cathedrals. For the Balinese, life is like that; Bali has no 'great' art to offer, perhaps because it does not need the majestic permanence of the Gothic cathedral, for art is just everyday living.

The thoroughness of this book will make it welcome to the student and the expert as a work of reference, for the writer's academic background and his present occupation as well as his field work have contributed to make this book with its rich and rare illustrations, its attention to detail, its lengthy bibliography and lists of films and recordings available of great value to those in search of scholarly detail. But because of its readability, the smoothness of the translation and the excellent photographs, the general, partly interested reader will find much to enjoy, and might even look closely at the eighteen photographs of a dancer's torso and hands in a *Topeng*, or masked, dance. He might also look into the details of the positioning of the instruments of the gamelan orchestra, the explanation of the tonic range of its component instruments.

There is, for instance, an explanation of the working of the orchestra itself, and an explanation of the *rapport* between dancers and *gamelan:*

Contrary to the more recent music of the modern Balinese, which is passed on orally, Old Balinese five- and seven-tone ritual music has a special notation composed of a simple series of signs which are scratched onto lontar-palm leaves. In old Balinese ritual music the notated series of notes are used as a basic melody and, like plainsong melodies in the medieval music of the twelfth to fourteenth centuries, as a structural melody with more or less extensive figuration.

A glance at the contents page shows the wealth of the book, its range, its scholarship. In the chapter headed *Ritual Art in Action* is a passage giving an indication of the breadth of knowledge of the author, the extent of his

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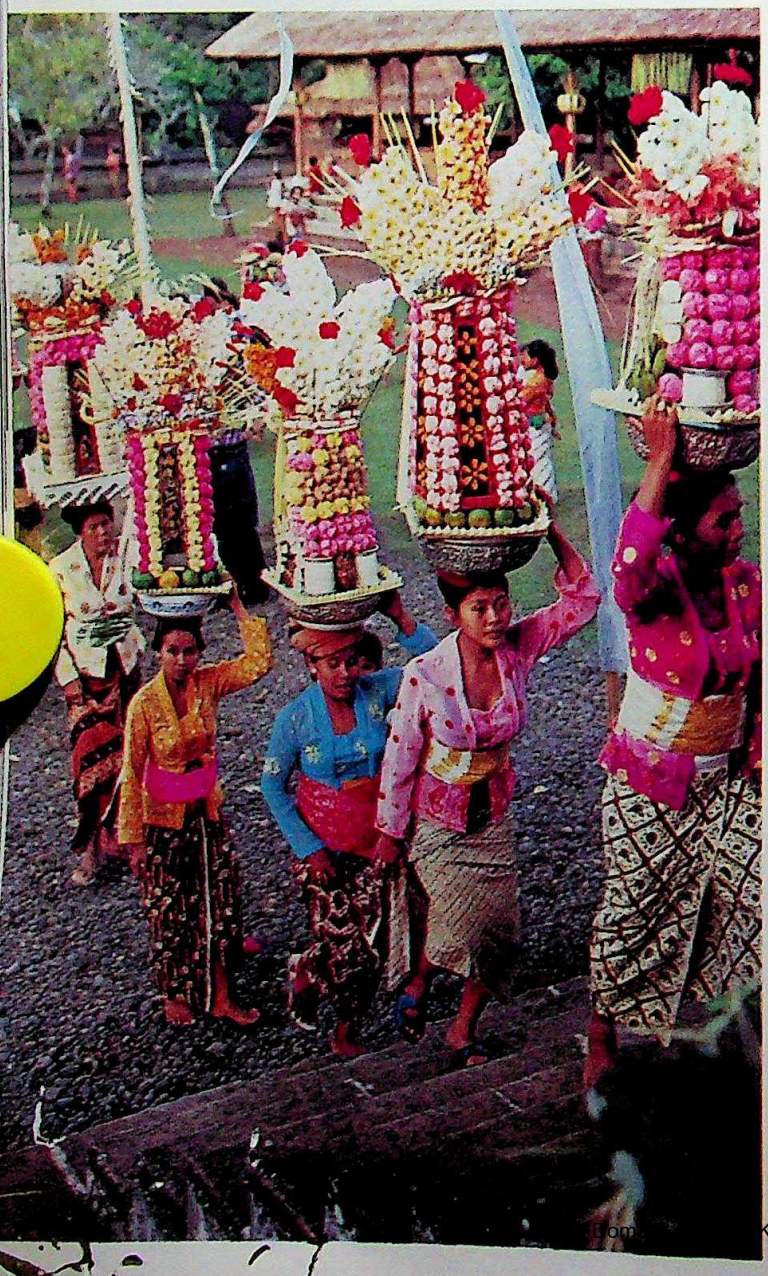

research; it concerns the mixture of animist beliefs a art—in this case, music.

In the East Balinese villages of Selat and Mun (Karangasem), the rice-goddess is symbolically fertil some weeks later by a more than life-sized male figu made of the fertility-promoting wood of the dapdap tr (Erythrina subumbrans). For the next thirty days com plex interweaving rhythms will be heard at dusk in ma villages at the foot of the Gunung Agung; they a beaten on small, bamboo slit-drums (kulkul tihing) youths moving through the streets of the village.

This purely percussive music, in which adults al take part from time to time, invites the essen (ngundang sari) that brings the fruit and thus a su cessful crop. The interlocking so-called oncang rhythms, meant here as an invitation to a welco power, have a distinctly exorcistic character at oth times and in other parts of the island. They are sounde when a solar eclipse announces catastrophes, wh villages are ritually purified before New Year's Day when Dewi Sri, the rice-plant, is pregnant and threa ened by demons. The rhythmic attraction of th oncangan *is so strong that it is often played for th sheer enjoyment of the participants or to make wo being done in a group easier.*

The oncangan *originated in the pounding rhythm beaten on the rice-trough. Four or five women wi heavy poles as tall as a man stand around a wooden trough* (ketungan) *which has been lifted from th ground and laid across two beams to improve th resonance. Two or three of the women husk the ri with regular blows at intervals of about one secon The others enliven the monotonous pounding rhyth with alternating blows against the inner and outer wa of the trough, dividing the series of eight success beats into asymmetric patterns of 3 + 3 + 2, 3 + 2 + or 2 + 3 + 3 units of time.*

The basic principle of alternating figuration and th interlocking of various rhythmic patterns divided amo several people was developed as ritual behaviour a the rice-trough. Freed from it and transferred to tun instruments, it has been a determining factor numerous forms of Balinese music (E. Schlager, 196

The scope of the book is tremendous, the result painstaking and obviously sympathetic research, for Ramseyer was quite clearly taken by the Balinese as serious and interested student of their way of living.

Perhaps the harmony with all around them that t Balinese have achieved is a result, for many, at leas of spending so much time in the open air (even many the temples have no proper roofs, so that the gods m come when requested). Demons there are, but some a protective of both gods and people. And even death a subsequent cremation are not times of unquenchab grief, for the dead will return, after leaving, much as t ancient Egyptians did, accompanied by reminders familiar objects, and lanterns are placed at the entrance to villages so that their spirits may come back. A death itself is, as Dr. Ramseyer so clearly shows, no moment of solemn pomp, but, as with birth and pube and marriage, a reason for creating more objects beauty, however short a time they may last.

It is to be hoped that Bali's crafts will survive the n invasion, however peaceful, and that we may never s kitchen towels or pottery ash-trays inscribed 'Bali, Isl of the Gods'. Perhaps works such as this one by Ramseyer may help to instil some respect in those w go to visit.

PHILIP GOW

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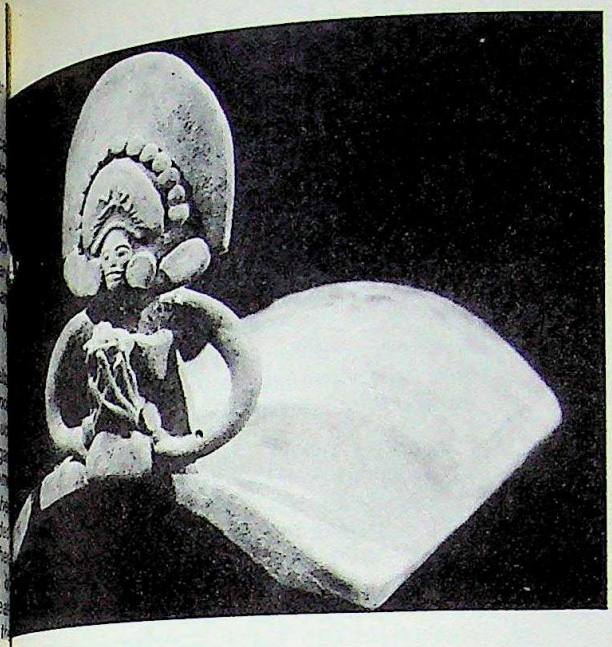
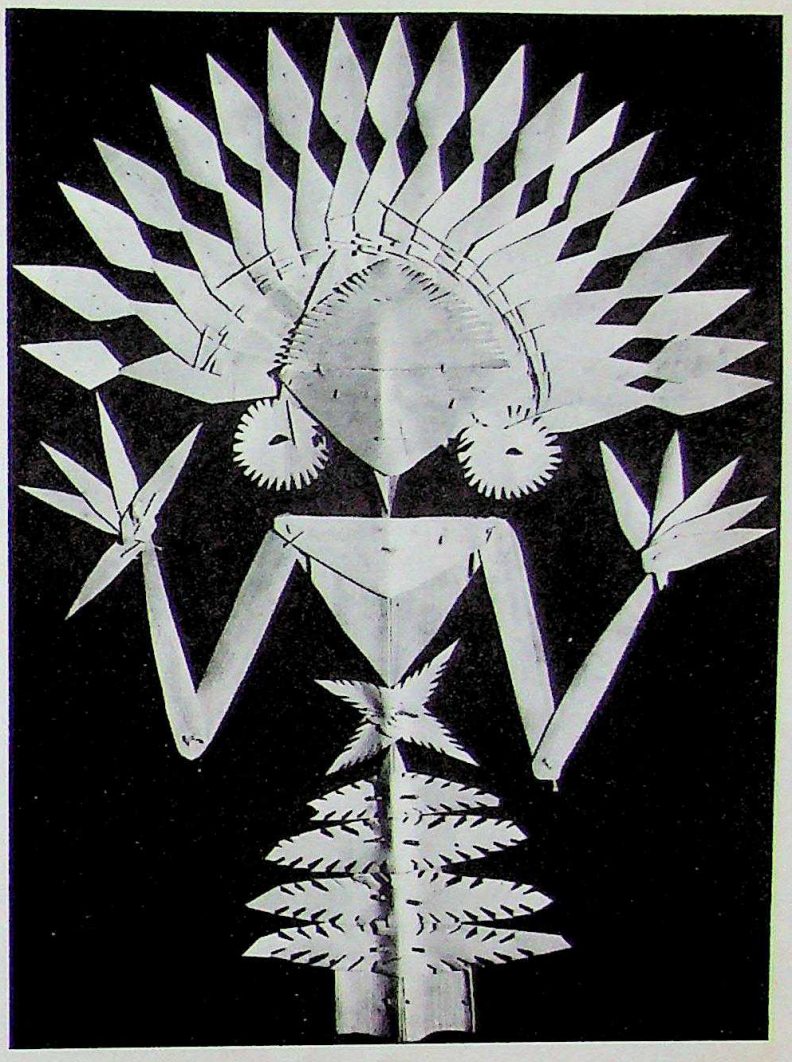
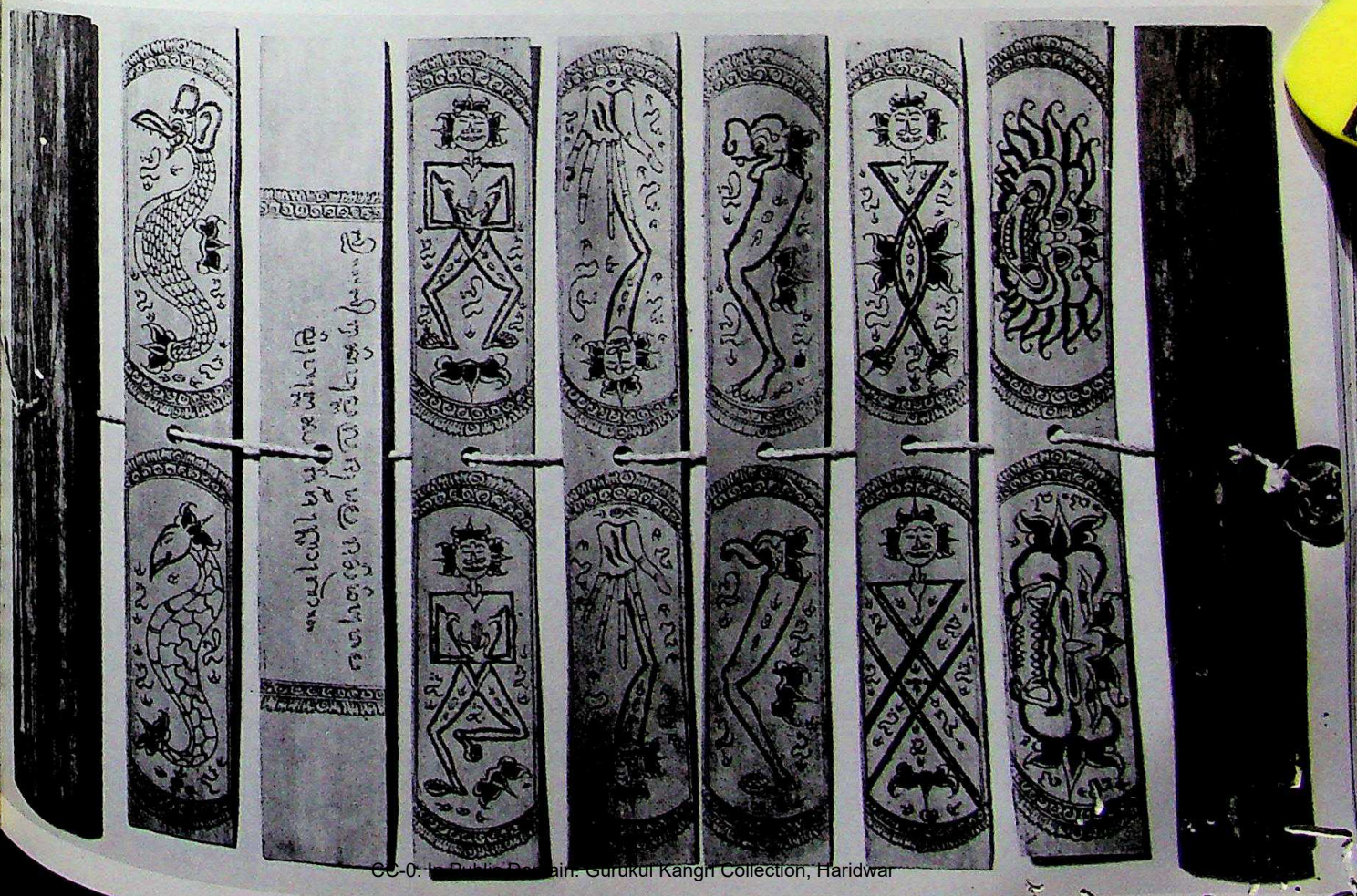




Opposite: Tapel Gebongan, *an ornament to be placed in the front of an offering; the face of a man, with a headpiece of flowers made from wood with mother of pearl inlay on the face. Below: Offerings carried to the* Pura Taman Ayun *at Mengwi for a ceremony of ancestor worship.*

Above: A roof-tile, decorated with a cili, *or Dewi Sri, symbol of fertility; right, a* cili *cut out of a palm leaf, part of an altar-hanging. Below: Leaves of the lontar palm, made into a book; the leaves are etched with the design or wording, then rubbed with lamp-black.*



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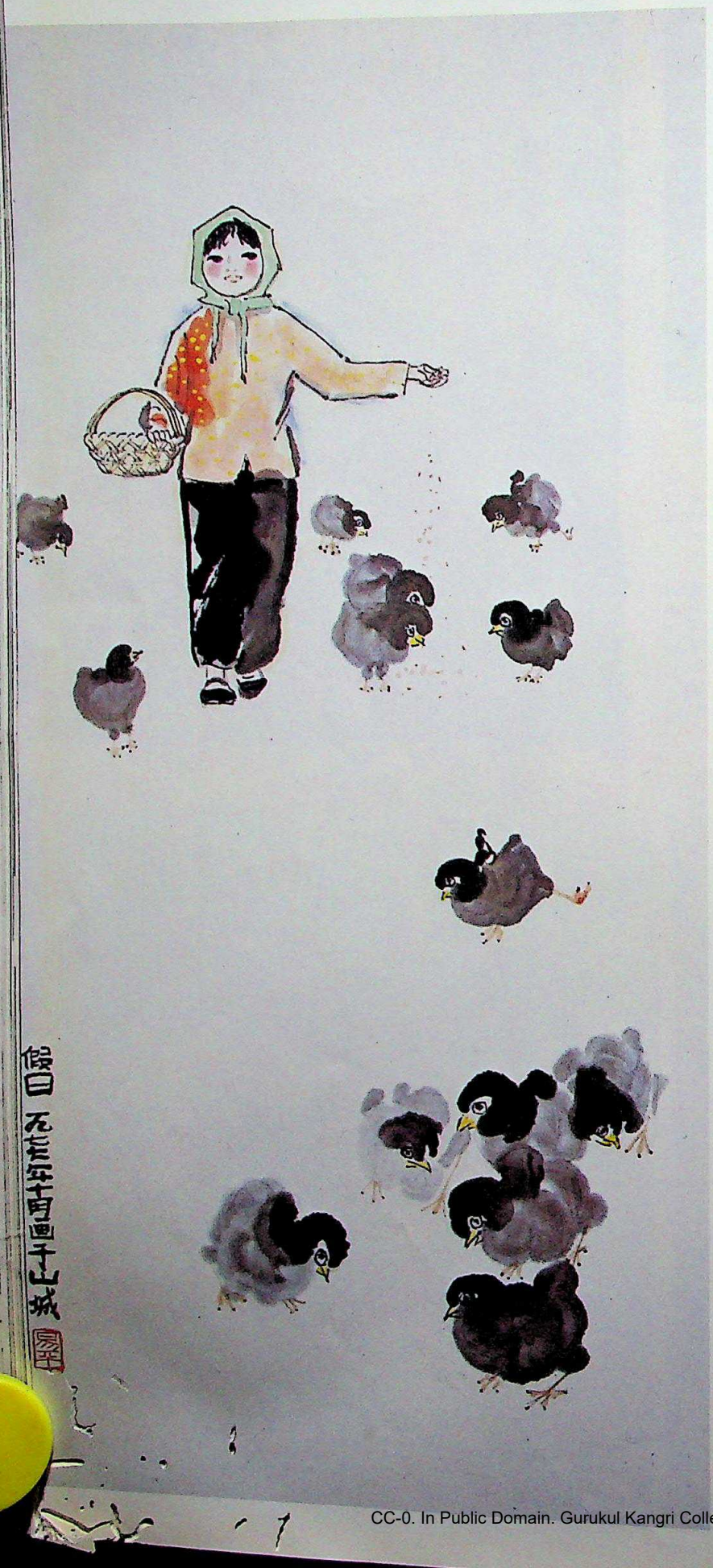
THE WORLD AS IT IS



Paintings by children the world over are as refreshing as a swim in a cool river or a plunge into rolling surf. An exhibition of Chinese youngsters' paintings touring Australia at the moment is no exception, but perhaps Chinese children, better behaved than many others, tend to follow the more traditional paths a little earlier than most.

Feeding Chicks is more in the traditional Chinese ink-painting manner, as shown by the chickens' feathers, their fluffiness emphasised by the gradations of grey wash used by Yi Pu of Szechuan. The painter is thirteen, old enough to have come into contact with adult concepts of painting, young enough to have retained the realism of the grains dropping from the hand of the farmer's wife, and the scared run of the scampering chicken in the centre that thinks it will miss out.

The goggle-eyed cock, by Shu Hsiao-Chu, reflects the impact that confrontation with an angry rooster has made on an eight-year-old. Picasso would have been grateful to have done that single, all-seeing eye and the proud and angry stance. Feeding the fish in a commune fish-pond is turned into a happy event by another eight-year-old, Huang Tung, from Szechuan, with the fish looking as overjoyed as the children.

More direct still are the four patient sunflowers, basking contentedly, painted by Chen Kang in Shanghai at the age of six; much more adult is an extraordinarily beautiful piece of design by a youngster of ten: Yu Ping, from Kiangsu. The composition is perfect: the line after line in strictly geometrical placement, the martial *Wushu* dancers (some of which were in Australia recently: *Hemisphere*, October 1977) contrasts with the loose arrangement of the surrounding crowd.

Gathering in the Turnips is another stylised painting by a ten-year-old. This is more in line with the farmer-painters from Huhsien (*Hemisphere*, July 1977). It's by Chang Chun, from Kiangsu, and is full of the country person's pleasure about a good crop.

Finally, *Frolicking Pandas*, by Hsu Hua of Shanghai (aged ten), who obviously got as much fun from painting the subjects as they did from their frolic.

This exhibition is to be matched by one of Australian children's art to tour China, which one hopes will be as lively.—Editor.

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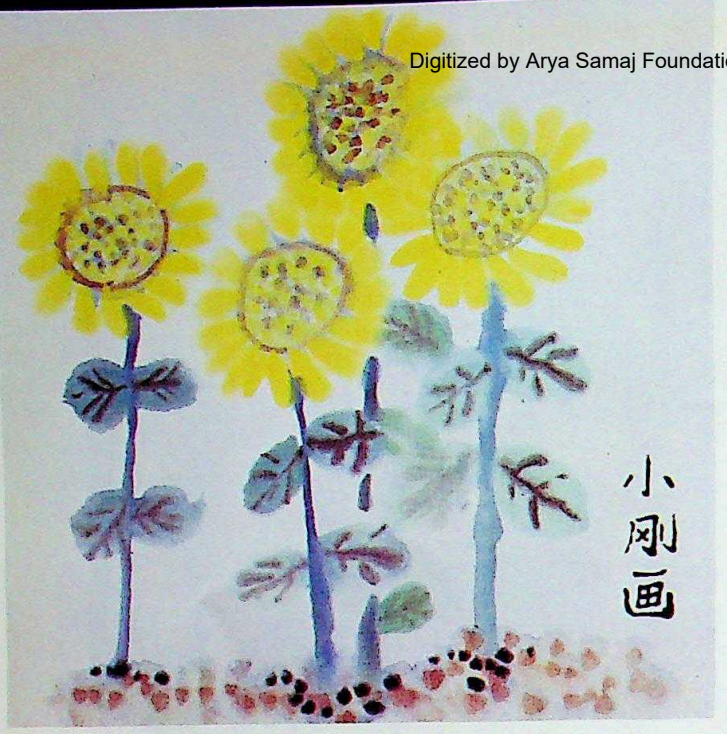

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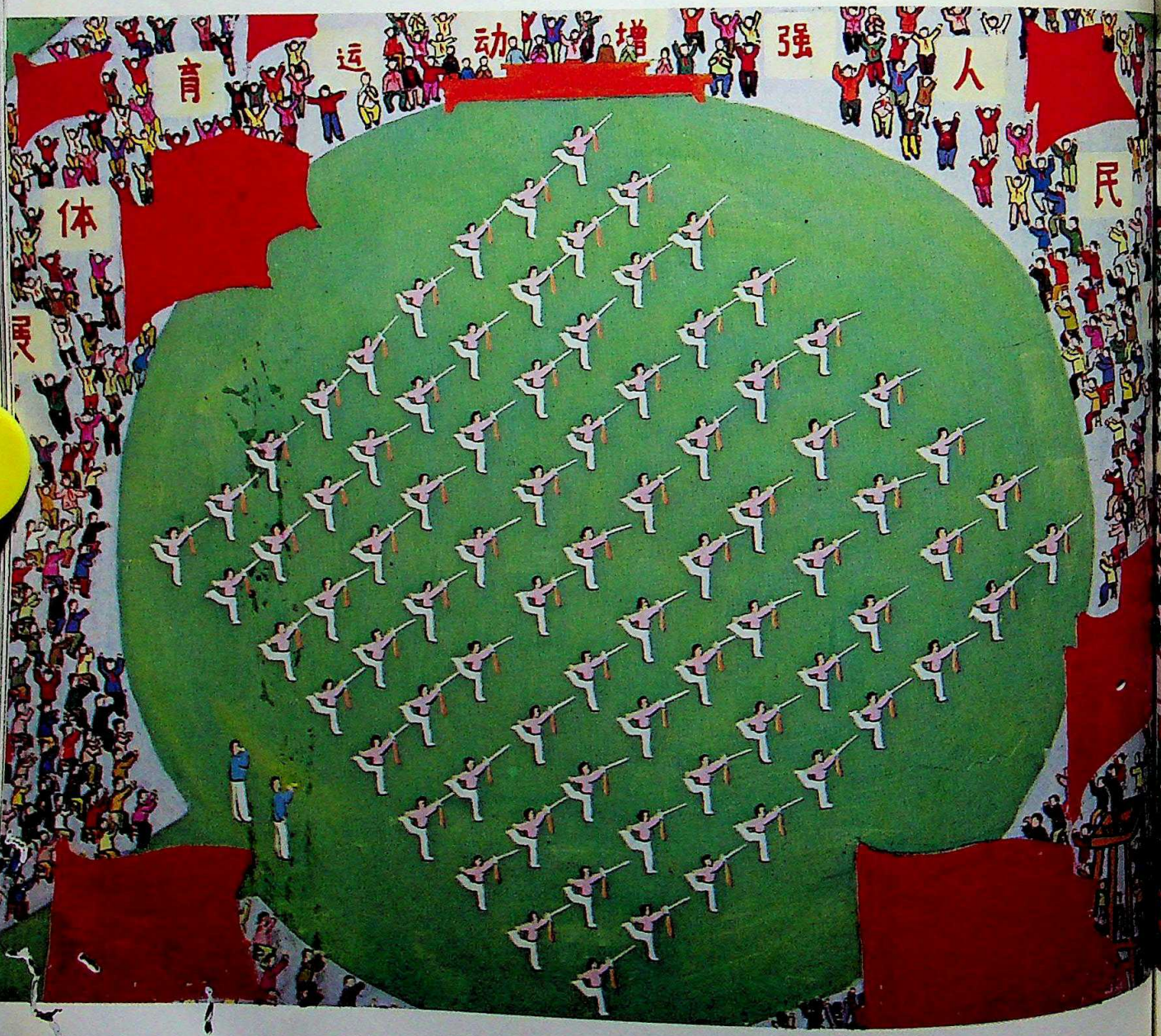

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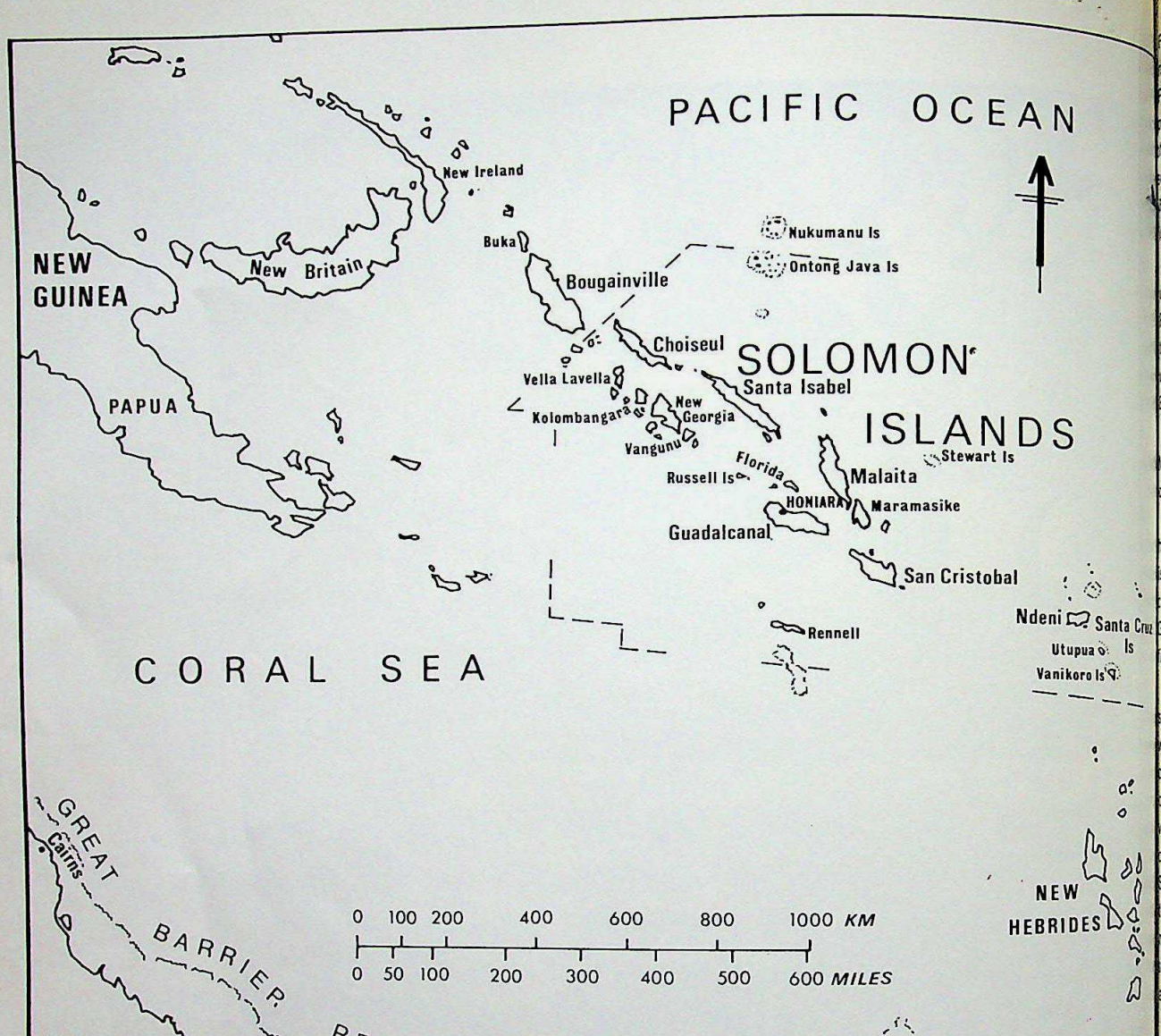

The Solomon Islands At Independence

Peter L. You

WHEN the Solomon Islands became an independent nation a couple of months ago, eighty-five years of British administration came to an end. The independent Solomons is the second Melanesian nation to the north of Australia — the first was Papua New Guinea.

The Solomons are a scattered archipelago of large and small islands lying to the east of Papua New Guinea. From the Solomon Island furthest west you can see the outline of Bougainville, the copper-rich island in the far east of Papua New Guinea. The larger, main islands make up a double chain some five hundred miles l running south-east from Bougainville.

The larger, high volcanic islands are settled by Me esian peoples who make up 93 per cent of the Solom population of a hundred and eighty-three thous according to the 1976 census. The outlying coral isla are settled by small groups of Polynesians who penetrated deep into Melanesia. In the west there settlements of Micronesians. The Polynesians prob came to the Solomons from islands east of the

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Fiji group some five hundred years ago. The Micronesians arrived less than thirty years ago. For the Polynesians it was an arduous canoe journey that has passed into their legends and tales of genealogy. It is thought that they were hunter-gatherers and that their settlement of the Solomons was an extension of the cultures that populated Papua New Guinea and outlying islands.

For the Micronesians the trip was by modern ships when the British administration in the Gilbert and Phoenix Islands decided that resettlement of some of these people in the relatively under-populated Solomons was a solution to the problem of over-population in British Micronesia.

It is estimated that most of the ancestors of the Melanesian people may have first entered the islands of the Solomons some six to eight thousand years ago. After the hunter-gatherers came a people with a horticultural economy who may have come to these islands some four thousand years ago. The earliest carbon dating of pottery found on the central island of Guadalcanal has been estimated at between two thousand five hundred and three thousand years old.

The Melanesian settlers of the Solomons lived in small villages. Even today a village like Vila in the western Solomons is considered impressively large, with only about a hundred families in it. Each village relied on slash-and-burn, shifting subsistence cultivation of various staple vegetables and the cultivation or gathering of various fruits. Today around 90 per cent of the Solomons population is in the rural areas and outside the cash economy of the few urban centres. The majority of the population of the independent Solomons still relies on subsistence farming. Present-day staples are the sweet potato and the yam.

Suspicion between one village and another still remains in the present day Solomons, partly because of different languages. There are some eighty different Melanesian language groups in the Solomons today and there were far more in pre-colonial times. The largest language group, the Kwara'ae, only makes up some nine per cent of the population.

Despite the romance of Alvaro de Mendana's brief stay in the Solomons in 1595, it was not until the 1890's that there was any substantial contact between Solomon Islanders and Europeans. By 1893 there were some fifty European in these islands — missionaries, traders and a few planters. Also during this period Solomon Islanders were variously invited, coerced or kidnapped to work on plantations in Queensland or Fiji. Although the activities of the 'blackbirders' were most disreputable in the neighbouring New Hebrides, it seems that the labour traffic in the Solomons was not as villainous as popular legend has made out. The work of the Australian historian Peter Corris* has done much to increase our understanding of the trade. Corris makes the point that the trade was not as unpopular as commonly believed, although undoubtedly there were cruel and unscrupulous operators involved in 'blackbirding'.

Students at an Easter feast, St. Joseph's Secondary School, Guadalcanal.

In part, the attention of the European powers was directed to Melanesia by the activities of a small band of missionaries and traders. British attention to this area was prompted by the Australian colonies' suspicions of the intentions of the French and the Germans in the islands to their north. Such suspicion had already provoked substantial rivalry between Australian traders and missionaries and their French counterparts in the New Hebrides and to a lesser extent, New Caledonia. Fear of a German presence in New Guinea had prompted the government of the colony of Queensland to call for a British annexation of Papua.

* P. Corris *Passage, Port and Plantation*, Melbourne University Press 1973.

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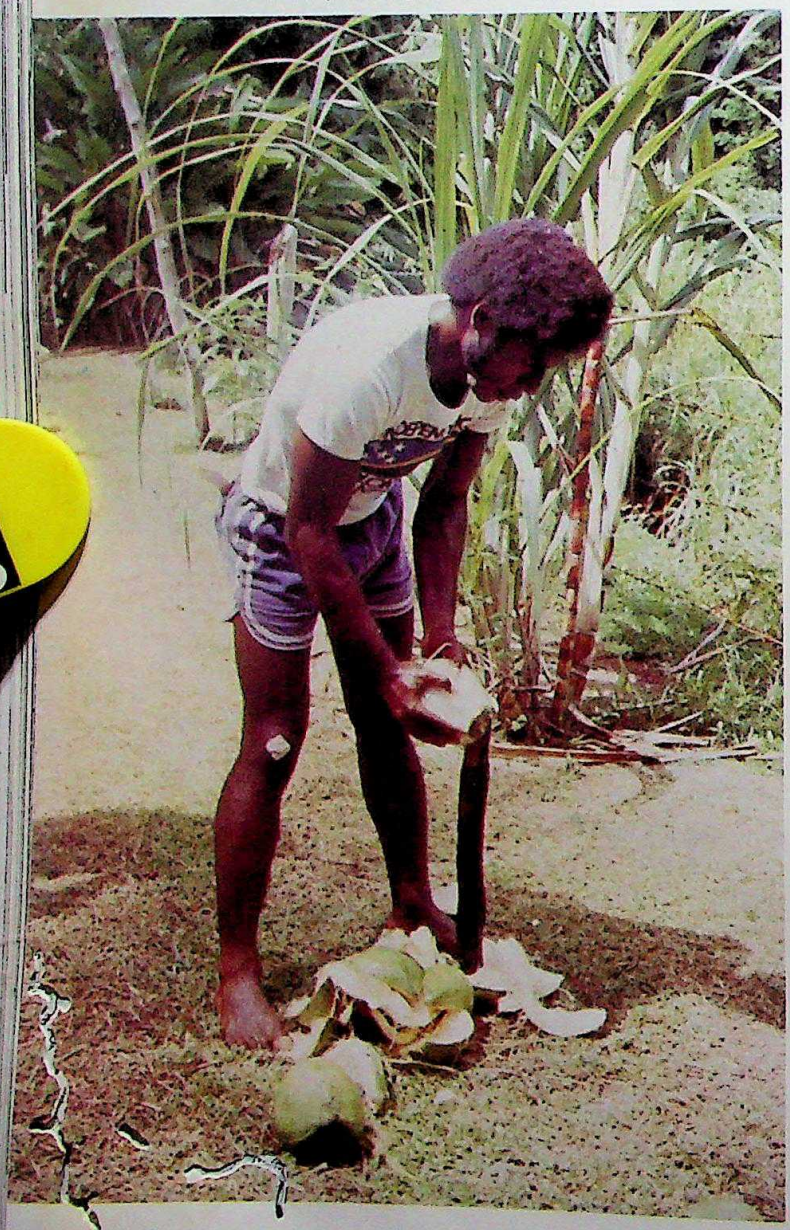
Dancers from Visale, Guadalcanal, and a man husking a green coconut. (Colour photographs by Janet Young.)



The establishment of a British protectorate over t Solomons in 1893 appears to have been inspired by number of factors. There was British and Austral concern about the activities of other Europe powers in Melanesia. There was a desire to regula the more unscrupulous 'blackbirders' as well as protect the missionaries. An attempt to put the islan under Royal Navy administration in 1891 had faile The navy clearly could not be everywhere and when did intercede, its 'justice' proved unsatisfactory to The missionaries found the navy too harsh and the me chants and planters did not like what appeared to the to be the 'high-handed' behaviour of the naval officer The naval administration caused more trouble than prevented. As an example of this justice, in 1892 HM Royalist shelled and burned every village in Rovia lagoon in reprisal for head-hunting raids.

In January 1893 the British government sent instruc ions to the Naval Commander, Australian Station, declare a British protectorate over the islands. Capta Gibson of HMS Curaçao did this on the island of Ne Georgia and in the central Solomons in June and Ju 1893. By the Samoan Tripartite Convention of 1899, t islands of Santa Ysabel, Choiseul, Shortlands and Ontor Java were transferred by the Germans to the British a in return the British relinquished their claims in Samo

Mr C. M. Woodford, a naturalist, was appointed t first Resident Commissioner in 1896. Woodford had be petitioning the colonial officials in Fiji and in London t some years to be made the first commissioner. He h even, at one stage, offered to go to the Solomons witho pay — he was above all a very keen naturalist. Woodf was, however, immediately drawn into endemic fight in the islands and one of his first actions as commissio was the destruction of some big head-hunter raid canoes on New Georgia. Woodford's administration co however, make little impact. He had few men and f resources. His administration was to 'pay for itse That is, the taxes he collected were to pay for the co of administration.

The Solomons was a colonial backwater. The admini tration had to confine itself to adjudicating land disput between local people and the European planters, restri ing fighting and head-hunting, enforcing rules for t enclosure of pigs and collecting taxes, which was muc resented among the local people.

The colonial administration in Fiji had seen the d astrous effect of European diseases on various Pacif populations. It was a general view among colonial o cials in British administered territories in the Pacific t the local populations would die out. Woodford expect that the people of the Solomons would have died o fifty years after he established his administration. Th did little to inspire activity by the administration on be of the local people. The fact that the administration w few resources and little inclination to interfere with t they saw as a dying race meant that the impact of t British protectorate was comparatively slight. The So

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mons was towards the end of a long line of colonies that were the concern of the Colonial Office. This combination of factors has meant that in terms of economic development the Solomons was one of Britain's most neglected colonial possessions. This had some good effects in that the impact of modernisation was less disruptive to the local cultures — especially in the central and eastern districts — and land alienation was not as great as in the New Hebrides or New Caledonia.

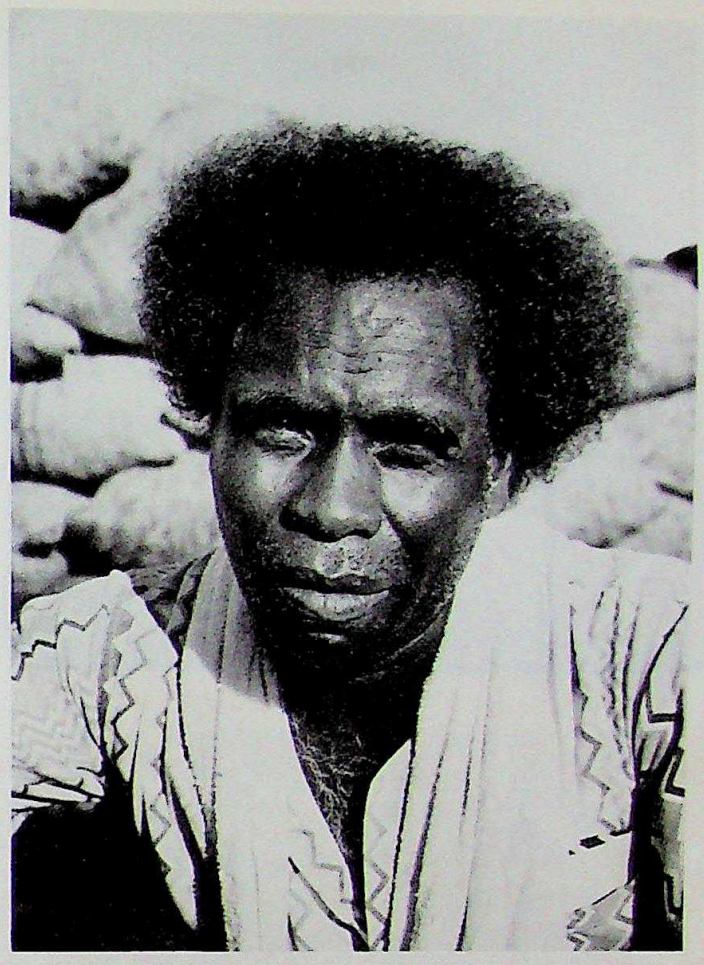
Perhaps of greater impact on the Solomons were the activities of the European commercial concerns and the activities of the missionaries. In 1905, only twelve years after Britain had declared a protectorate over the Solomons, Lever's Pacific Plantations chartered the steam yacht *Victoria* from Sydney to send some of its representatives to the Solomons to investigate the possibility of establishing plantations. The following year Burns Philp established a plantation in the Solomons. In 1909 the Queensland Malayta Company (Fairymead Sugar) took up land in the Solomons.

At the same time as the companies were establishing plantations, labourers were being repatriated from Queensland. These Melanesians provided the nucleus of a labour force for the plantations. The activities of the colonial administration in seeking taxes provided an incentive for the local population to obtain some cash income, and the repatriated men had a demand for some European goods that they passed on to others. The planters had far more socio-economic effect on the Solomons than the colonial administration could hope to have.

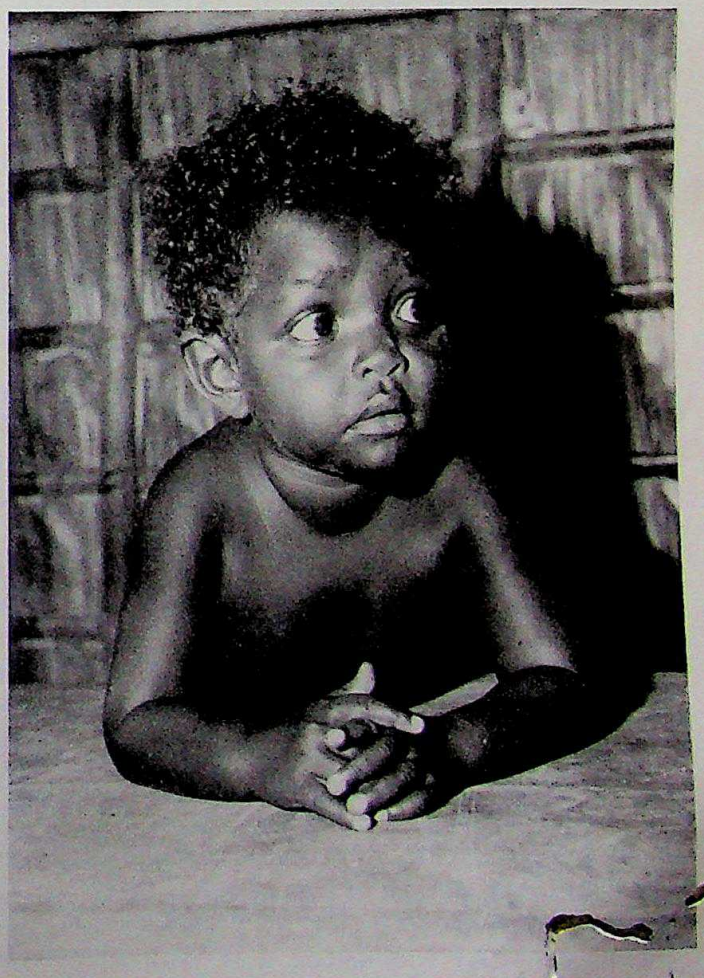
It is significant that the colonial administration tended to look down on the planters as avaricious troublemakers. This prejudice ensured that the colonial administration took the side of the local people against the land-hungry planters and this greatly limited the loss of land by the Melanesian villagers. It has however had an effect on the independent Solomons in that the colonial administration regarded all apparently unused land as customary land rather than Crown land. The government of the independent Solomons has inherited little Crown land from the former colonial administration.

It seems reasonable to argue that the Christian missionaries had the greatest impact on the Solomons. The first missionaries to establish themselves in the Solomons were a group of French Marists who landed on San Cristobal (more commonly referred to these days as Makira) in 1845. The mission was abandoned in 1848 after the murder of the bishop and three priests, and the death of a fourth priest due to malaria. The misfortune of the Catholics did not deter others. The Anglicans became resident in 1865, the Catholics returned in 1898, the Methodists came in 1902, the South Seas Evangelicals in 1904, and the Seventh Day Adventists in 1914.

The impact of these various missions on the people of the Solomons varied considerably. Operating mainly



A man from Gizo and a youngster from Nunda. (All black and white photographs by Hedda Morrison.)



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Artificial islands off Auke, Malaita, and students at the Teach Training College, Honiara.

in the central and eastern Solomons, the Catholics and the Anglicans were more tolerant of local customs. In particular, among the Anglicans, the recently deceased Bishop Charles E. Fox identified strongly with the Melanesian people. In his book *Story of the Solomons,* he clearly sees himself as a Solomon Islander.

The Catholics adopted a policy of assigning priests to particular areas where they would live, work and die. This meant that the priests had to come to terms with the local customs and become fluent in the local language which gave them greater insight into Melanesian culture. The Catholics have been the most inclined to use customary religious practices where they are compatible with their view of Christianity. Moving into notorious head-hunter country in the western Solomons, the Methodists were less inclined to take a more favourable view of the local culture and generally disparaged it wherever possible. The Methodists worked with Polynesian assistants. Not only did Christian festivals replace traditional ones, but where dances were required, Polynesian dances were taught to the Melanesians. Local historian Esau Tuza believes that by 1918, traditional dances in the evangelised west were something of the past and Polynesian dances predominated.

The fact that each missionary group tended to evangelise in a particular geographical area has had its effect on the Solomons. Religious loyalties are now underlining regional loyalties. Each church adopted a particular language from its area to serve as a *lingua franca* among the converted. Roviana was the official language of the Methodists until the 1960s. This combination of language and religion has further strengthened regional loyalty and has been a factor in the limitation of the spread of Pidgin English as the only *lingua franca* among the various language groups of the Solomons. (See *Hemisphere* [illegible] 1978.)

Health, education and welfare were provided by the missions before the second world war. This meant some changes in settlement patterns. The Catholics encouraged their parishioners to move near to the mission stations which were on the coast. General movement towards the various mission stations was facilitated by the end of wars and feuding as the influence of the administration and the missions increased. The tremendous change which allowed this movement to the coast may be highlighted by an example of the isolation of a village in the highlands. One archaeologist, when interviewing an old man in a highlands region, reported that the village in the past had had no word for coconut. Given that the ancestors of these people would have had to come from the coast, the loss of the word for coconut reflects a long period of being cut off from the coast or even the sight of the coast on an island no more than twenty or three miles wide.

The missions were the only source of modern education available to Solomon Islanders before the war and still today dominate secondary education. The government has only really begun to participate in the provision of education since the 1950's.

The local people have retained some of their old customs; such aspects of customary life as bride-price remain. The west has also seen the establishment of an indigenous schismatic church, the Christian Fellowship Church which was begun in 1960 by Silas Eto who has woven together elements of local religious symbolism with Methodism.

Resentment over taxation and the colonial administration interfering in feuding spilled over into violence in 1927 when police patrols on Guadalcanal and Malaita islands were killed. The latter case resulted in a subsequent punitive expedition made up of local expatriates that produced a lot of indiscriminate shooting and greater problems for the colonial administration.

Of greater significance for post-war political devel-

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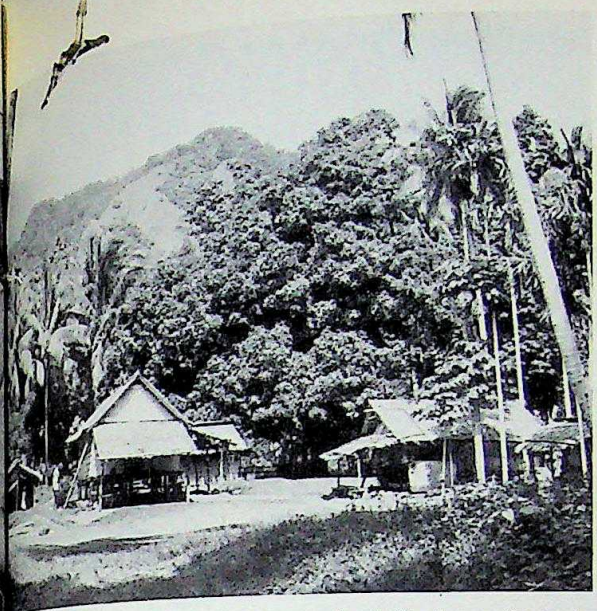

Village in western Guadalcanal, and shell decorations in preparation for a festival.

ents was the union of religious and traditional leader-hip achieved by the South Seas Evangelical Church on Malaita. This church was able to educate the sons of a mber of chiefs to the point where they became portant lay-preachers and Bible instructors. This was notable success for cultural continuity as compared th other areas where traditional leaders tended to lose eir place to the priest or pastor.

The war brought great turmoil to some areas of the olomons — especially in the west and on the plains st of the island of Guadalcanal. On the other hand here were large areas which were ignored by the panese. But those islanders affected by the war had chance to meet a new type of European with different ews and a far higher standard of material wealth. he presence of U.S. troops on Guadalcanal caused eat changes.

The impact of the Americans on the political develop-ent of the Solomons is a matter of debate. Bishop ox and C. H. Allan (the last colonial governor) saw the mericans as important influences on the proto-national-st *Ma'asina Ruru* movement which developed after the ar. In the view of these two men, the Americans were verly generous with supplies and money and tended to ppreciate British imperialism. Official reaction at the ther seems to have regarded *Ma'asina* as dangerously nd-white and anti-government. Official reports empha-ised the cargo cult aspects of the movement.

Ma'asina played an important role in the political evelopment of the Solomons. Its greatest strength was the most populous island of Malaita. *Ma'asina* was very effective attempt to create a counter-administra-on. It aimed at an administrative and judicial system its own. The *Ma'asina* chiefs (significantly, eight out the nine were SSEC Bible teachers) refused pay-ent of taxes to the colonial administration. Taxes would e paid to *Ma'asina* which would set up model agricul-tural villages where whites might be employed as advisers, but not as masters. The plantations, recovering from the ravages of war, would be refused labourers unless they paid the unheard-of wage of £24 a month (the pre-war wage was 10/- a month).

The colonial administration's consternation was in-creased as the movement overcame the boundaries of language and traditional rivalry on Malaita and then spread to Ngela, San Cristobal, Santa Ysabel and Guadal-canal. Leading chiefs were gaoled for three years.

Ma'asina created an awareness among the colonial officials that they should allow greater avenues of politi-cal participation for the local people. It also showed the colonial administration that there was a greater prospect for co-operation between Melanesians than had been hitherto thought. There was also, inevitably, as post-war developments unfolded, a growing awareness that Britain's empire would one day dissolve into a host of independent nations.

In 1952 local councils were established. In 1960 the Legislative Council which made the expatriate senior administrators the executive and enabled a small num-ber of indirectly elected Melanesian members to act, in effect, as the opposition, was established.

The Solomons goes into independence with many of the problems of other developing countries. Despite the need for developmental funds and knowledge, when I interviewed the Solomons Finance Minister, Mr Benedict Kinika recently, he said he felt that economic problems were not the major ones that the Solomons faced at the time of independence. He saw the greatest problem for the Solomons as being the regionalist loyalties of the people. These must be overcome before national unity can be a reality.

THE AUTHOR: Peter L. Young is Head of Social Science at St. Joseph's Secondary School, Tenaru, Solomon Islands, and a free-lance journalist.

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LIVING AND LEARNING

Sandra Sta

When two entirely different ways of living and cultures are brought together, patience and understanding a sensitivity are needed by both sides. The old idea of imposing a way of life on another people is past history; the of telling a people whose ideas have been moulded by centuries of doing things their way and whose thinking conditioned because it is done in a language so different from a European one or an Asian one, as is the case the languages of our Aboriginal population—this idea can no longer be expected to work.

Sandra Stacy, a Melbourne nurse who is doing her Master's degree in the Department of Anthropology Sociology at Monash University, Victoria, spent some months in Central Australia working on a health program Aboriginal people. She underlines the differences and the problems that arise in this thoughtful article.—Editor.

Learning your own language is a lot easier than learning someone else's—to begin with. (All photographs of Pitjantjatjara ch by courtesy David Milliken, Northern Territory Division, Australian Department of Education.)

A GROUP of Aboriginal people took me with them to collect bush food. We travelled from Alice Springs down a bush track till we came to the second dry creek bed. This was a very good place for finding some particular birds which were part of the traditional Aboriginal diet. As we collected these and prepared to eat them, a group of white men could be seen further up the creek bed. They, too, were collecting the birds and carefully putting them in cages. One of the Aboriginal women shook her head. 'Just look at those white fellows,' she said, 'selling our good food.' I could almost hear the white fe saying, 'Look at those Aboriginals eating our profit.'

People look at the world in different ways. I bec aware of the differences between the views of traditio oriented Aboriginals and white people while I was w ing as a health educator in Central Australia. W people have known for many years that the health o Aboriginal people has been worse than that of the re the Australian community. Much of this illness and d involves children under two years of age and is ca

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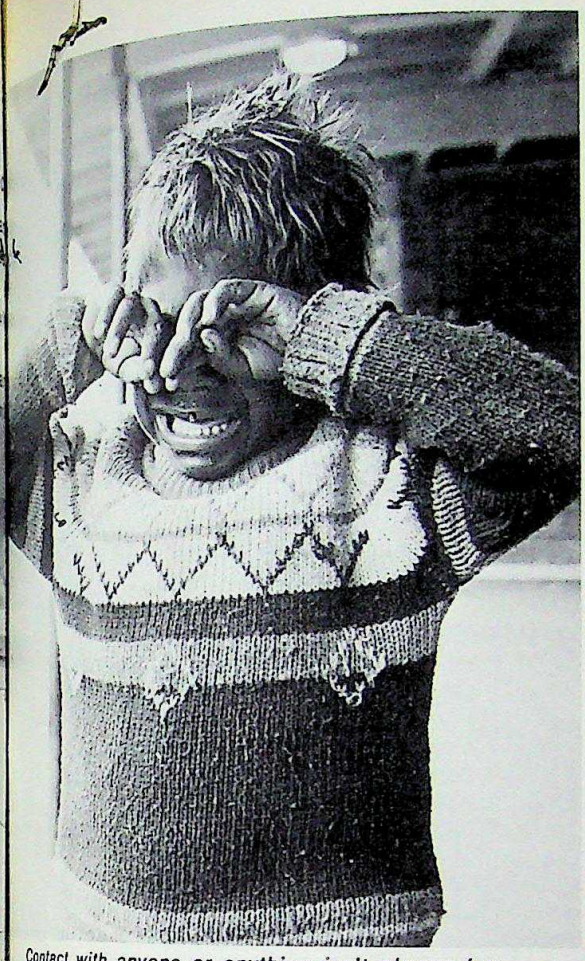

Contact with anyone or anything isn't always fun.

A water-pipe is fun anywhere.

respiratory disease, diarrhoea and under-nutrition. ...lth workers know these conditions can be prevented. ...e health education program I worked with differed from ...ers because it aimed not only to teach Aboriginals ...out nutrition and hygiene, but also to learn from them ...out their traditional customs and food.

The program was started because both the white people ...d the Aboriginals were distressed when children died. ...e Aboriginals involved were from the Pitjantjatjara ...guage group who lived on missions, government settle-...nts or cattle stations. They had access to western ...hools, medical services, shops and technology, but they ...ll lived in their family groups, spoke their own language ...d performed the ceremonies that were part of their ...e.

The aims of the program were explained to the Pitjant-...tara people, and those who wished to participate came ...groups to Alice Springs for a three-week residential ...rse. Courses were also held in the bush. The teaching ...th ways—was in the Pitjantjatjara language. Specific ...ucational techniques which had proved successful in ...er parts of the world were employed and the program ...tinued for four years.

We found that, if asked, those who had taken part in ...e courses could repeat accurately the lessons we taught ...d perform the appropriate tasks. However, there was ...indication that they applied this knowledge in their ...-to-day life. We tried to discover why, when they appeared to understand and they seemed keen to learn, that they didn't actually do anything.

It had been assumed that because Aboriginal parents showed concern when their children became seriously ill or died, they would wish to try something new to alleviate this concern. This assumption was found to be part of the way of thinking of the white health workers. It was not shared by the Aboriginals. These traditionally oriented Aboriginals do not view health as an inalienable human right, and they accept a high level of infant mortality and morbidity as part of their way of life. They view this in much the same way as white Australians view the deaths on the road. We express concern about road accidents and we are distressed when lives are lost, but on the whole we accept these as part of our way of life.

I then asked why, when these Aboriginal people were prepared to tolerate a high level of illness and deaths among their children, did they choose to participate in the program? What were they gaining from it?

It seems that these Aboriginal people see relationships as the most important thing. They want to do things which enable them to interact with other people. They chose to participate in the program because they saw it as an opportunity to make friends with white Australians. For Aboriginals the relationships are an end in themselves. This is quite different from my view as a health educator who sees the establishment of rapport or relationships as a necessary step in achieving my goal of improved health.

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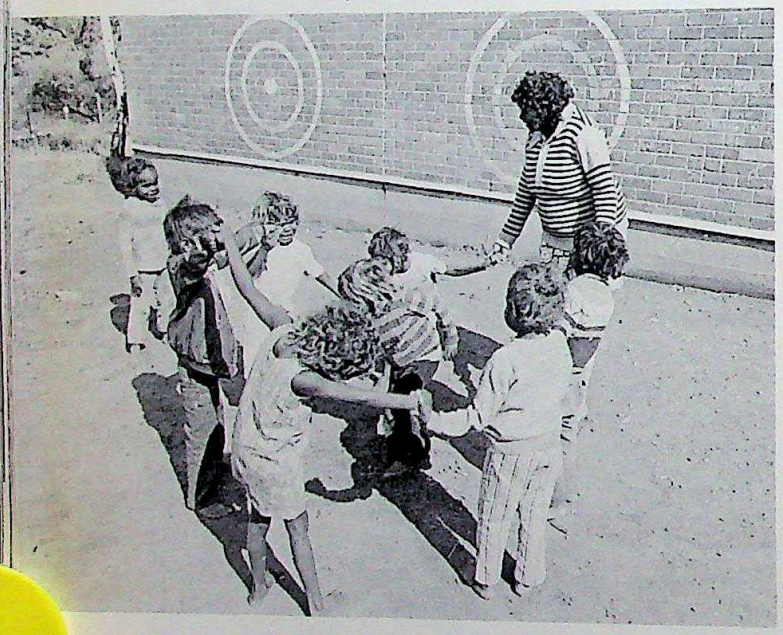
Anything's good for a game.



So it would appear that I was busy building relationships so I could teach, and the Aboriginals were participating in the program so they could build relationships.

The white people involved in the program had learnt many isolated facts about the Aboriginals, but we had not realised they were seeing the program in a completely different way. Let me give an example of this. When I began working with the Pitjantjatjara people I knew that parents tended not to introduce solid food until their children were about twelve months old, and after this the child's diet consisted mainly of damper* and tea. We recognised a need to teach about adequate, balanced diets for children. I learnt that the people had one word for meat, *kuka*, and one word for everything else, *mai*, and traditionally they ate both *kuka* and *mai*. I felt the information I wanted to impart about the different values would be more easily understood if I used two food groups which were already known to Aboriginals, rather than introducing three or more groups. Furthermore, the fact that they had traditionally eaten both *kuka* and *mai* was a starting point for talking about the need for a balanced diet. I asked each group to tell me about their traditional foods and I used this as a base for the discussion. We stressed the importance of giving an adequate balanced diet to the children.

However, from the Aboriginal point of view, the understanding of what was going on was probably more like this:

> We went with our relatives to her place to stay with her and she came and stayed with us in our country. She wanted to know about the food we ate in the old time and we told her stories about the men hunting kangaroos and emus and the women collecting lizards, goanna witchety grubs, tomatoes, yams, seeds and figs. We explained how we gathered this food with our relatives and how we distributed it amongst them. We told her which relatives we had to give food to, and which ones we had to receive food from.
>
> She was very interested to learn we called some things *kuka* and some things *mai*. She told us we should eat both *kuka* and *mai*. She didn't understand that when we found food it was distributed among those relatives to whom we had obligations. So we explained it to her again. We told her about the importance of our relationships and that sharing food in the way our ancestors taught us was a way of expressing those relationships. She still didn't understand. She said we should eat *kuka* and *mai* and give it to the children.
>
> We explained again that the children do not have the obligations the adults have. If the children are hungry and ask for food we give it to them. But they might ask for other things and we give them those too.
>
> Poor thing, she just didn't understand how we use food.

From my point of view, no matter how the subject of food was introduced, be it traditional or European food, sooner or later, and usually sooner, the Aboriginals would turn the subject round to their relatives. It was very frustrating for me; and in retrospect I realise it must have been equally frustrating for them.

It appears that because of the way I understood the world I was seeing food in terms of nutrients; because of the way the Pitjantjatjara understood the world, they were seeing food in terms of relationships. We were looking at the same thing from different points of view.

One thing that became clear during the program was that the knowledge and understanding of the Aboriginal people differed from that of the white people. When it came to sickness the white people knew that it was caused by germs. We knew that an undernourished child was more prone to infection and that infective diseases are far more likely to prove fatal if the child is undernourished.

The Aboriginal people have told me they know sickness is caused by spirits. Sometimes spirits enter people and make them sick and sometimes their own spirit leaves them. This may happen when someone has done some

Bread made only of flour and water.

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Time out for a group photo.

ng wrong, or they may just be unlucky and go into a ce that contains a spirit that will make them sick. metimes a spirit is blown by the wind and a lot of ople get sick at the same time. These people knew that e medicine man is the person who knows how to deal h spirits that cause sickness. They told me that if he n do this they know the person will get better, and ded that sometimes the white doctor or sister could e medicines that might help the person to recover more ckly. They said they had heard white people talk about rms and food but they did not believe them because y knew sickness was caused by spirits.

What people know, influences how they act. Let me strate this. One day at a government settlement it was served that many Aboriginal parents were buying shoes their small children. It was something that could dily be missed — most of the toddlers were wearing w shoes; nothing else, just new shoes. The storekeeper mented that she had not sold a pair of shoes for ths, and that morning she had suddenly sold every r in the store. The Aboriginal people had limited money d it was confirmed by both Aboriginals and white people at the money available had been used to buy shoes tead of food. The white people were concerned because y saw that the children, who were already under-nourished, would have little to eat for the following week. They set about planning another health education program to teach the parents how to prevent sickness. The Aboriginal people, too, were concerned. The previous day one child in the camp had become very ill and they knew the particular spirit that had caused this; they recognised its presence because of the type of sickness. They knew it was likely to be still in the area, and that it could enter other children not only directly by also through their footprints. The parents were protecting the children by covering their feet.

The actions taken by the white people were consistent with white people's knowledge. The actions taken by the Aboriginals were consistent with their knowledge.

The white people's knowledge is part of the way we understand the world. The Aboriginal's knowledge is part of the way the Aboriginals understand the world.

Those who see the world the same as white people like myself will know they are right because we are making judgements using the standards which exist as part of our understanding. Those who share the Aboriginal point of veiw will know they are right because they are making judgements from within their understanding.

Who is right?

Can this question be answered?

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Stockmen in north-western New South Wales during a time of drought. (Jim Fitzpatrick, formerly A.I.S.)

DRIER THAN DUST

Owen B. Williams

To people on the crowded island of Java, or in over-populated Bangladesh, the continent of Australia, as big as the United States but with such a small population, must seem not merely a lonely place to live, but a rich one. Geographically, the fact is that the amount of arable land in Australia is little enough; though deserts are few, irregular and infrequent rainfall in many parts of the immense island make farming hazardous and even disastrous for the small man. For years, parts of the country can remain unwatered.

For many years, people on the land in Australia treated erosion derisively. An expert on termites was, before the w[illegible] an amateur conservationist and was often nearly in tears of rage when farmers told him they would not accept his suggestion to leave saplings in the dread, jagged-edged trenches dug by torrents of rare rainfall; the saplings were all that would hold the land together: the men on the land knew well that no grass would grow under trees . . . And anyway, there was always new pasture over the hill. Now, things are different, and conservation is a fact of life for farmer and city-dweller alike in Australia.

Owen B. Williams, an ecologist with the Division of Land Resources Management with the Commonwealth Scientific and Industrial Research Council, writes of the problems that have led men to make deserts out of farmland or forest in almost every part of the world.—Editor.

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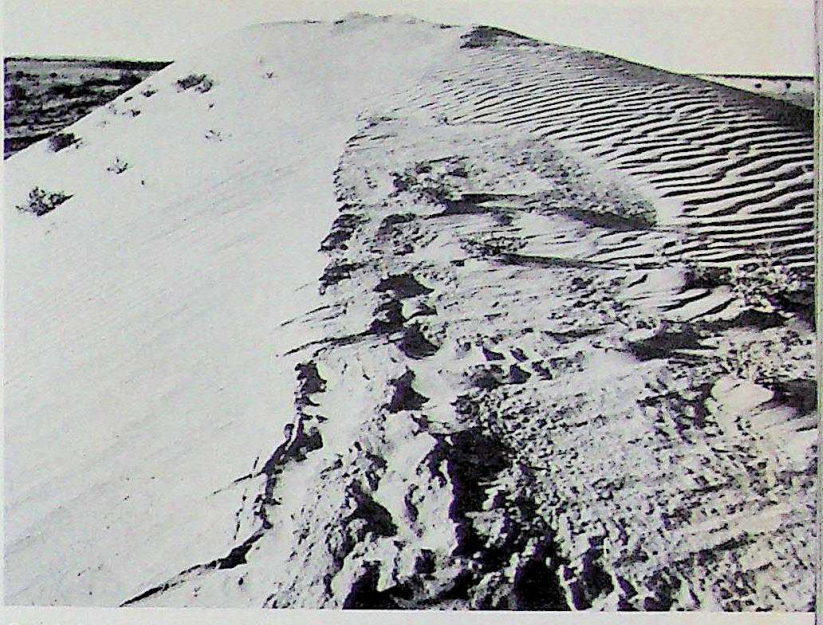
The film on the once-proud Tuareg people, now reduced to being fringe-dwellers, was coming to its end. Earlier, we had watched villagers planting trees on eroded rocky hills in Ethiopia and viewed the scars of soil and water erosion in a number of developing countries. We had seen dust storms sweep across former grazing lands and firewood on sale in village markets that was only pencil thick. One of my Australian colleagues, thinking of the sparse population of our vast continent, said 'It makes you humble, doesn't it?'

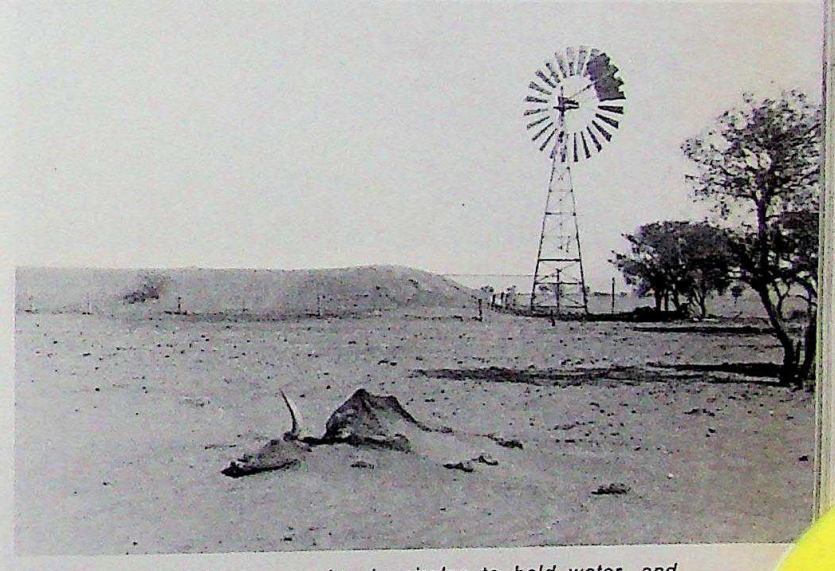
This was during the United Nations Desertification Conference held last year at the Kenyatta Centre in Nairobi. We spent three weeks with delegates from some eighty countries that had experienced in varying degrees the effects of animal and population pressures, the clearing of the forests and growing crops in marginal environments, which should have been given constant care.



Sand dunes in Australia's desert country, and a drought during which the underground water dried out, making the windmill useless. (A.I.S.)

DESERTIFICATION is the making of deserts from land which is not desert; it is a desiccation process and can be typified by the change from long-lived, dull grey bushes or tussocky grasses to ephemeral green carpets which turn yellow, white and red at flowering time. In a few short weeks these annual plants will have dried and the exposed soil surface will be parched, just at it was before the rains came.

Desertification as expressed in its physical form is soil erosion with sand drift, sheet erosion and gullying, relocating the surface soil in ridges and valleys. Apart from the direct loss of plant nutrients when the soil is removed, there is the indirect loss caused by exposure of subsoils, and subsoils are not only poor in nutrients but also provide poor environments for desirable plant species in which to germinate, grow and reproduce. The water relationship of exposed subsoils is poor; after a little rain their surfaces seal, infiltration is impeded or stopped altogether and subsequent rain runs off the slopes or stays ponded on the flats until it evaporates. Run off from subsoils high in soluble salts can initiate or extend saltpans and salt lakes.



Furrows, pits or banks are dug in circles to hold water, and trees or perennial grasses are sown to hold the ground. (Photo Michael Jensen, A.I.S.)

The impetus for the United Nations Conference on Desertification came from a group of African countries, south of the Sahara. Many years of drought in the late 1960s and early 1970s had caused many deaths of livestock and people. Early in the preparations for the conference it had seemed as though drought should be the main theme, but following the analyses of the Sahelian experiences and those in other countries, including Australia, it became clear that the seeds of desertification were sown many years before the droughts. Atmospheric drought (the absence of expected rainfall) merely precipitates a crisis whose causes are in one or more of the fields of politics, economics and sociology. When rains fall we should not be surprised at the extent of losses in livestock and humans, as well as in soils and vegetation.

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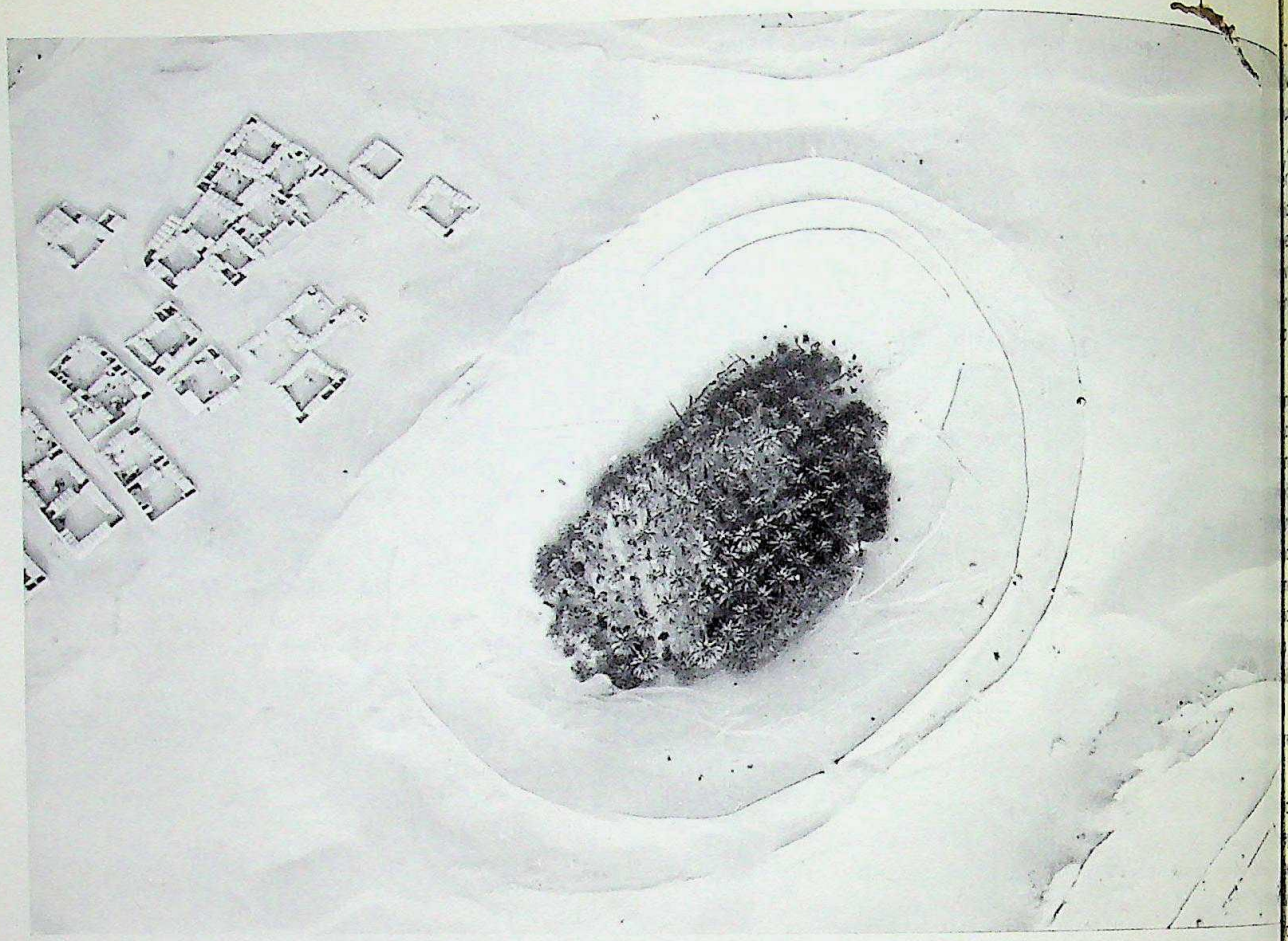
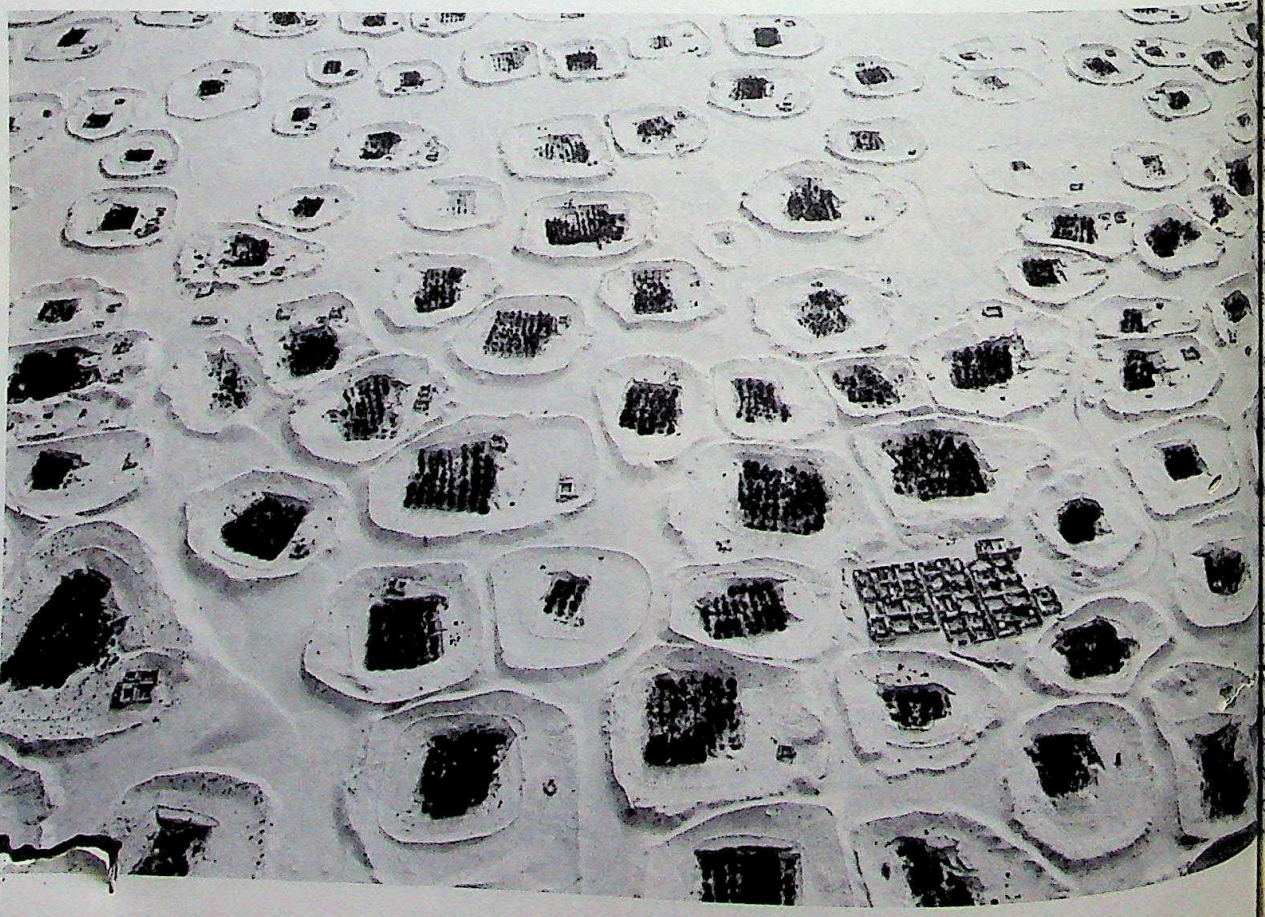


Fronds of date palms used to make barricades against encroaching sand in the Algerian Sahara to protect the plantations. (Photo Georg Gerster.)



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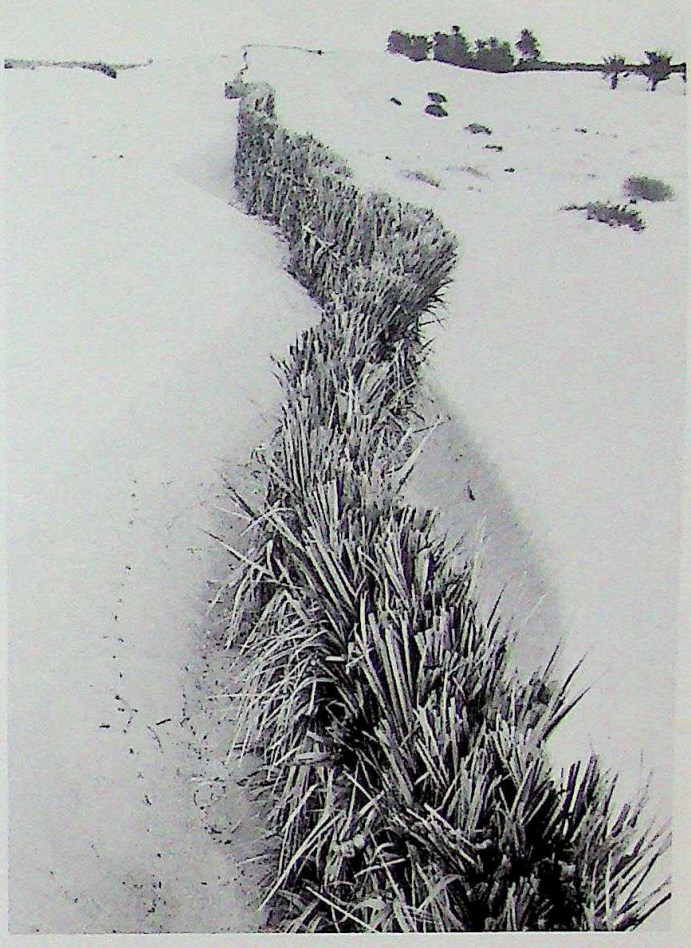
vestock and humans have shown their ability to repro-
ce, unlike soils and vegetation.

At Nairobi, the conference delegations extended the
m desertification to encompass most of the world's
mes: tropics and sub-tropics, temperate and subhumid
re included and why not! Many an Asian hillside shows
idence of soil loss, deterioration of vegetative cover and
p failure due to the non-arrival of expected rains and
unseasonal torrents.

Curiously, Australia is a land of lakes—dry and salty,
d of rivers and creeks—sandy and seldom flowing.
ok carefully at a large scale atlas or a resource map
d you will see them. Surface water is absent to scarce,
n perhaps a few rock holes and springs in rocky hills.
ound part of the coastline runs a narrow ring, seldom
re than a few hundred kilometres wide, of better
dowed country. There most of the stable agriculture,
st Australians and over 95 per cent of recent immigrants
Australia live. Although the semi-arid crescent separates
s ring from the desert core, there are times, say once
ten years, when the desert in meteorological terms
eaks through to the coastline.

Australians not only inhabit the driest continent in the
rld, but also have one of the most variable rainfall
gimes. At Alice Springs in the centre of the continent,
e annual rainfall in 1974 was more than three times the
erage. Rainfall is an accident, with winter rains coming
m an occasional very strong south-westerly depression
d with summer rains coming from erratic northerly
clonic depressions. There can be localised thunder-
rms which are dry and some which are wet, dropping
o to three hundred millimetres on a front of a few
ometres in a matter of minutes and producing flash
ods. These events are unpredictable and in some years
en the great circum-global belt of high pressure cells
ich proceed from east to west across the continent fails
move northwards in autumn, all but the strongest of
pressions are forced away in a south-easterly direction
o the southern Tasman Sea. However, under these
me conditions, late cyclonic depressions in the form
warm moist air masses have been able to penetrate
e desert core and travel southwards to the Southern
ean where they have been incorporated into the
cum-global belt and carried out over the Tasman Sea.
One apparent measure of this unreliability is given by
e designed capacity of Australian dams and urban water
pply systems, which are larger in relation to average
nfall than elsewhere.

Water was needed before a viable livestock industry
uld be built and from the middle 1800s when the semi-
d crescent and more favoured parts of the desert core
re settled, walls were constructed across creeks, large
servations were scooped in the earth to form tanks,
ls were dug and boreholes were drilled into shallow
ifers and into sub-artesian and artesian basins. Pumps
wered by wind, iron tanks and troughs were installed
d paddocks were fenced with posts and wire.



A palm-leaf fence built in the arid zones of Tunisia to stem the flow of sand, and sand-dune fixation experiments with drought-resistant plants in Iran. (Photos courtesy Food and Agriculture Organisation.)

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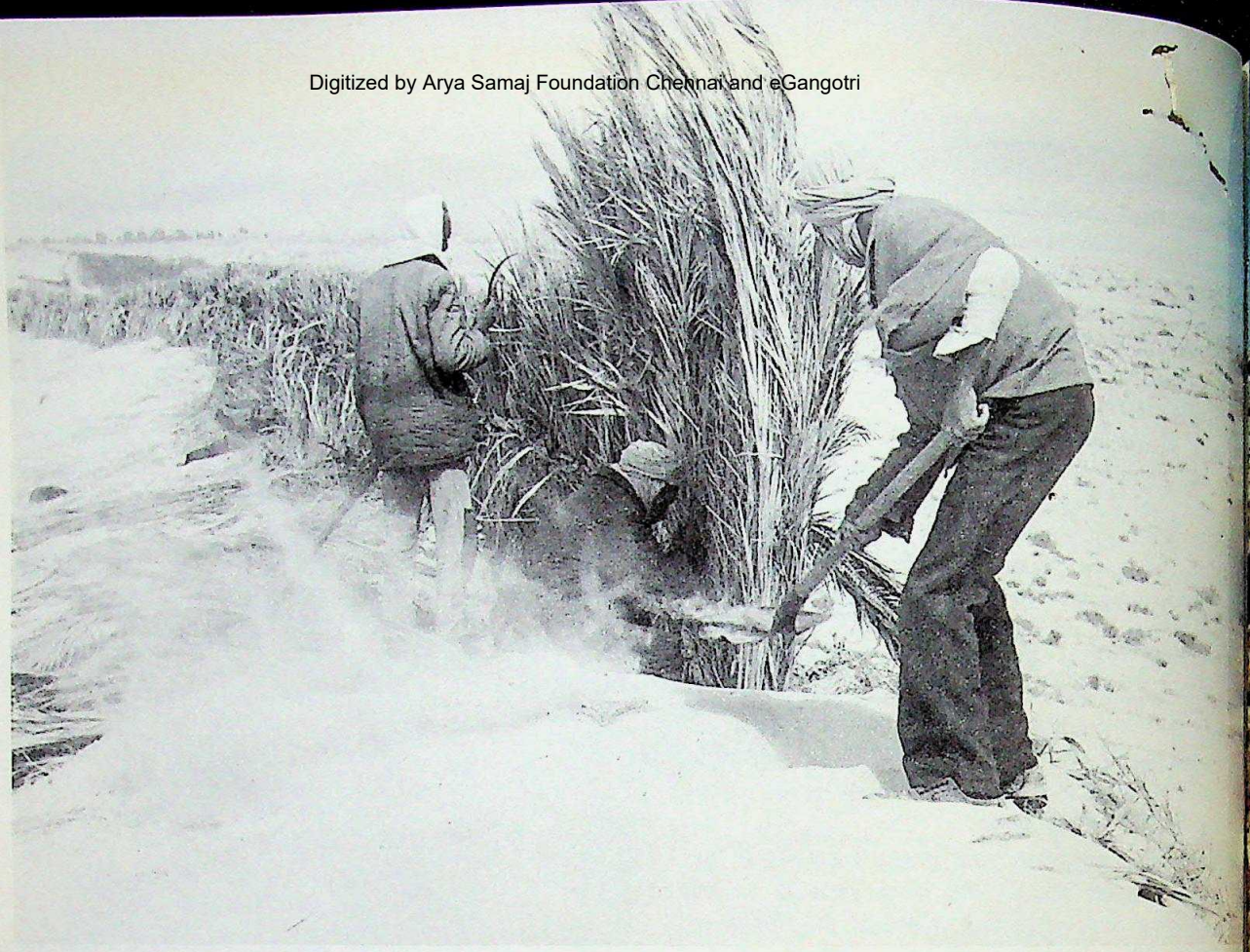

Workers building an artificial sand-dune with the aid of palm fronds to protect roads and small villages in Tunisia; as the fen covered, another is built on top of it. Below: Early stages in the work of planting indigenous pines in sandy soil by protec them with artificial hedges. The work is being done in Cagliari, Sicily. (Photo: Cassa di Mezzogiorno.)

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The ancient city of Avila in Spain, not far from Madrid, the capital. Avila, the city of St. Teresa, is in one of the many dry areas of inland Spain. (Photo courtesy Spanish Embassy, Canberra.)

Water technology and the reliability of the water supply were of the utmost importance. It is not unusual for sheep and cattle to rely entirely on water stored by human ingenuity for six to twelve months each year, depending on the season, the type of vegetation, the permeability of the soil and the topography. The capital cost of providing a stock-water supply was, and is, very high, and a figure of twenty thousand Australian dollars per successful watering point would not be unusual. This region of Australia was described a hundred years ago as being a country for capitalists, and it still is.

Most flocks are set stocked or continuously grazed at a rate of from 1 sheep/ha, to 1 sheep/40 ha depending on the aridity of the particular district and the type of vegetation. A viable sheep enterprise requires from five thousand sheep upwards, although less than this number can be profitable with good housekeeping and prudent management. At present a viable pastoral station would require an investment of two hundred thousand dollars or more.

With this background we can start looking at desertification. Soils are old and as expected with old soils the physical structure and nutrient status are poor. It is no surprise to find that the indigenous plants are slow-growing and long-lived. Further, there were no large flocks or herds of herbivores. Surface water was scarce and the soft-footed indigenous fauna remained close to permanent water-holes, evolved peculiar water conserving mechanisms which are a continuous delight to physiologists, or they adopted various strategies to avoid the heat of the day, a field of interest to animal ecologists. The accumulated grass which had grown in the occasional bountiful seasons was burned either by the indigenous Aboriginal people or by fires started by the lightning of dry thunderstorms.

The effects of introducing sheep and cattle with their hard hoofs and the European rabbit were devastating. Plants unadapted to grazing were reduced or eliminated and the soft spongy soils that absorbed the rain so readily were made impermeable. The subsequent run off initiated sheet erosion and gully erosion. Plants that held the sandy soils in place were damaged and fires laid the soil surface bare. The onset of drought, the hot northerly winds and the pounding of the surface soil by countless hoofs resulted in great dust storms which swept across southern Australia to the coast and beyond, even to the glaciers of New Zealand.

It is natural for attention to be focused on drought

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because the damage is highly visible, but the causes precede the drought: too many animals, too few plants of the type to carry the breeding-flock from one rainfall event to the next, to hold the soil in place, or to reduce the wind speed across the soil surface—and—rabbits. However, optimism prevails and a short run of good seasons is sufficient to erase the memory of the drought. New people replace those broken by the financial disaster and permanent changes in the vegetation are noted by few. The cycle is set up and another run is in progress.

I am not convinced that the leasehold tenure of Crown land, so often blamed as a cause, is responsible for desertification. I have noted that erosion is equally bad on farms of similar size in the same district whether the farm is freehold, and owner-occupied or vested in the Crown (government-owned and lessee-occupied). However, widespread and general desertification *does* appear to be more common in regions where legislation on leasehold systems has not only permitted, but actively encouraged the subdivision of large landholdings, than in regions where subdivision was discouraged.

How to start a desert. A scene near the old mining town of Hill End, west of Sydney, where trees have been felled. Dry weather will turn the soil to dust,, and winds have been known to carry dust far out over the Pacific Ocean. A similar problem is said to have occurred in Spain, when whole forests were felled to build the Armada. (Photo: Trevern Dawes.)

Throughout the pastoral crescent the rangelan... ing the most desertification are on the historic ... routes along which millions of sheep and cattle ... walked to market. Initially these stock routes follo... the major watercourses and even today, more than seve... years afterwards, deterioration in soil and vegetation ... be detected up to two and three kilometres from the ... or creek. Pressure has been kept on this country u... this day because of the natural or man-made ... supplies sited in or near these watercourses.

Another conclusion reached at the UN Conference ... that desertification is spotty. Though the desert ... appear to be on the march, what has been observed ... the joining up, over time, of the small isolated pat... of grossly desertified landscape; these patches are o... the most productive rangeland; or are adjacent to vill... or to stock water. The same effect can be see... Australia.

Although there is no evidence to suggest that ... present management of Australian rangelands is ... desertified rangeland into the non-desertified categ... there is evidence to suggest that desertification has ha... and that additions to the pool of degraded rangeland ... being made on a paddock or property basis, rather ... on a district or regional basis. However, it is pos... that recent runs of good seasons have merely ma... the underlying malaise and, as in the Sahel, severe ... term drought may tear this mask away.

The economic climate is bleak, as the cost of g... and services for pastoral enterprises increases faster ... the returns from the sale of wool, sheep and cattle. ... booms have joined the legends of the pastoral drea...

However, this bleak picture has some redeeming f... ures. Incomes cannot be maintained, as in the pas... increasing the number of sheep and by increasing ... grazing pressure on the rangelands. For once, econo... and conservation are proceeding hand in hand.

In Third World countries the rural populations ... moving in increasing numbers to the cities and migr... to Australia have already shown their preference for ... equable climate and proximity to the great coastline ... which the large cities are located. The volume of ... duction from marginal pastoral regions—and even ... ginal arable regions—is not large. The continuation ... present economic trends could lead to less use, ... outright abandonment where soil and vegetation resou... are limited; a substantial rise in fuel prices ... accelerate this movement.

Some writers have argued that the pastoral ind... is a 'slow mining' operation and using this analogy ... could think of desertification as inevitable environme... damage; the ore was low grade at best and the ec... capital it gained was part of the foundation on w... present-day Australia was built. These lands have se... their purpose. Is this correct? Do we now close ... these mines?

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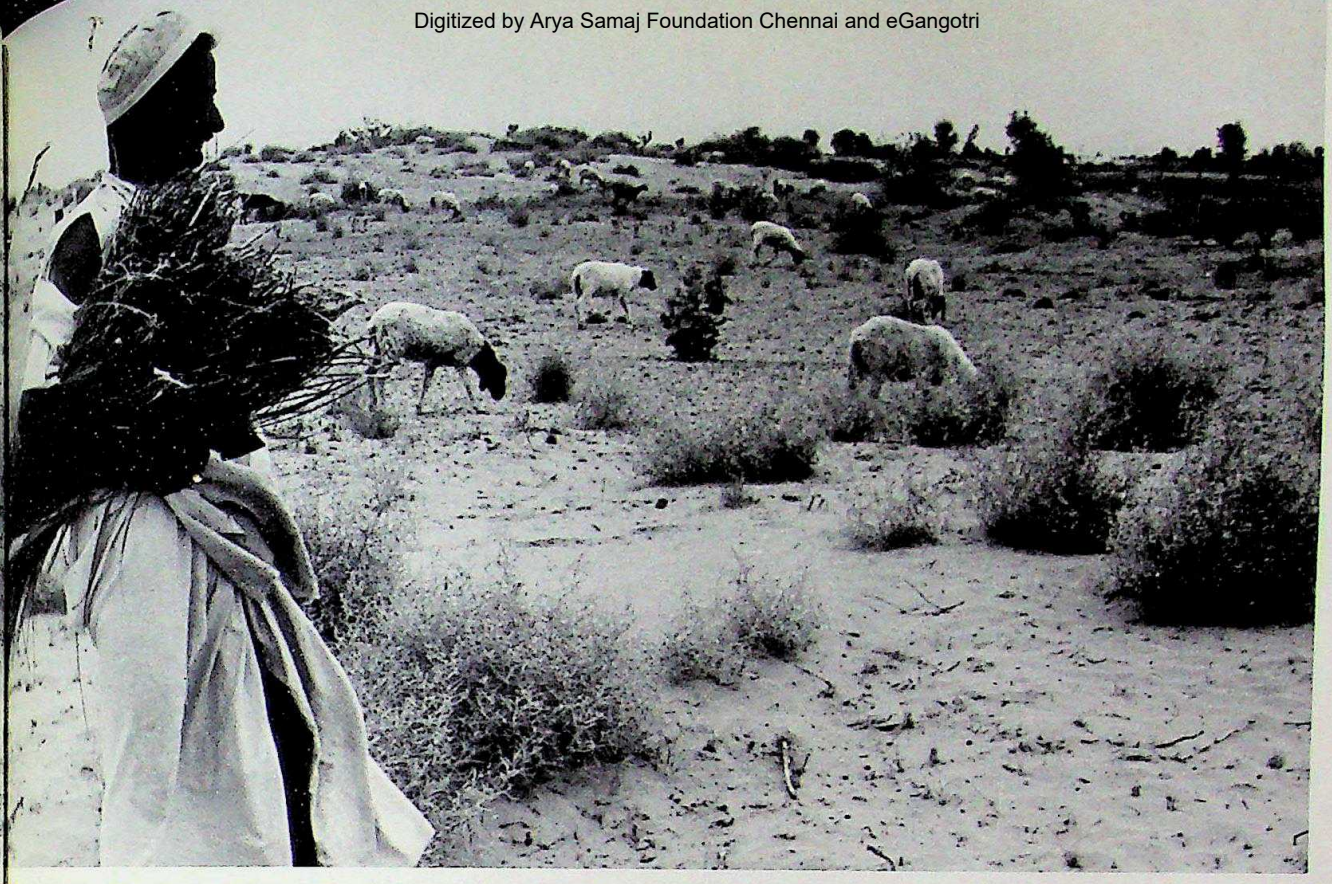
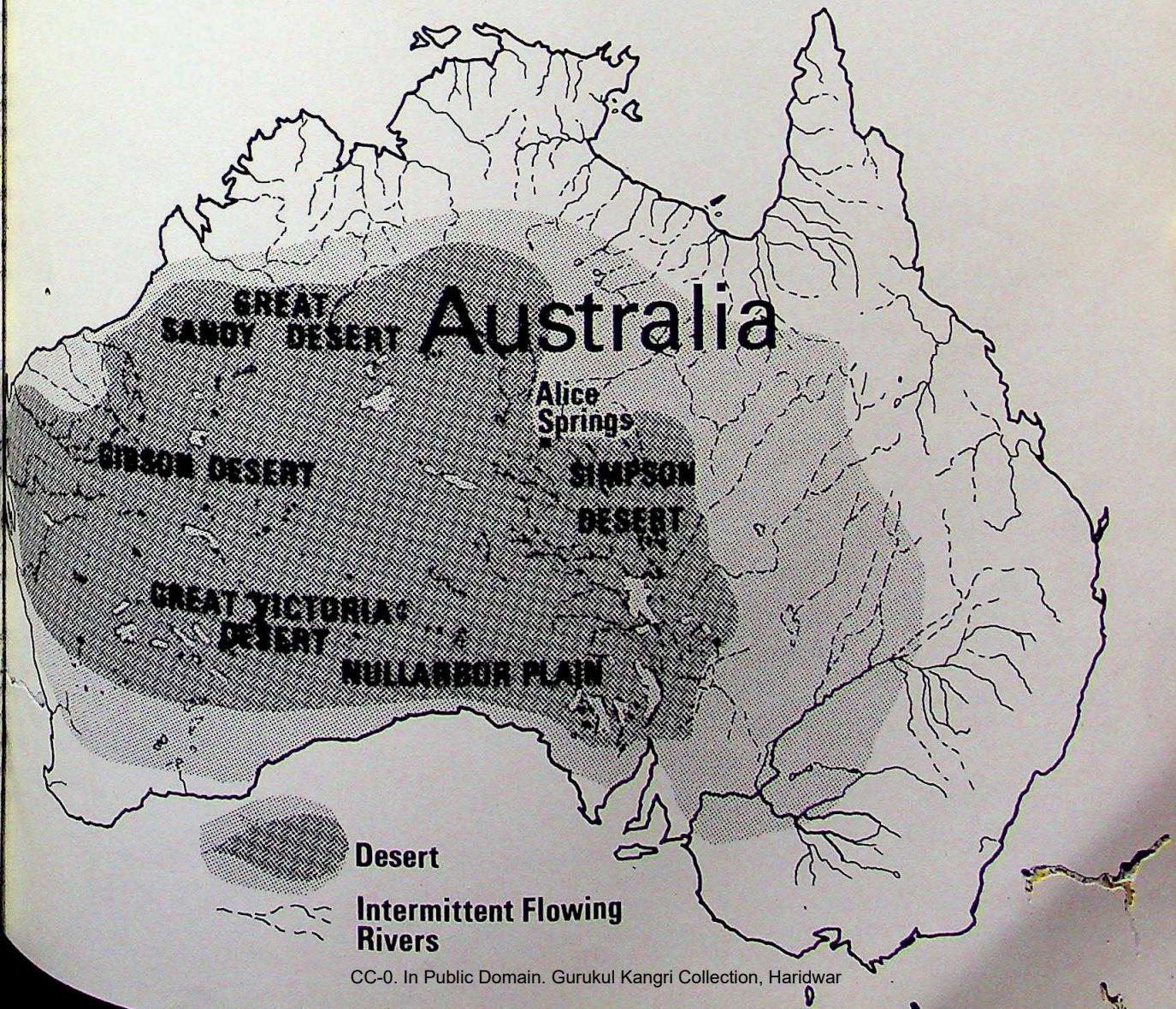


A shepherd in the Thar Desert, Pakistan (sheep are less harmful grazers than goats). (Photo: Camera Press.)



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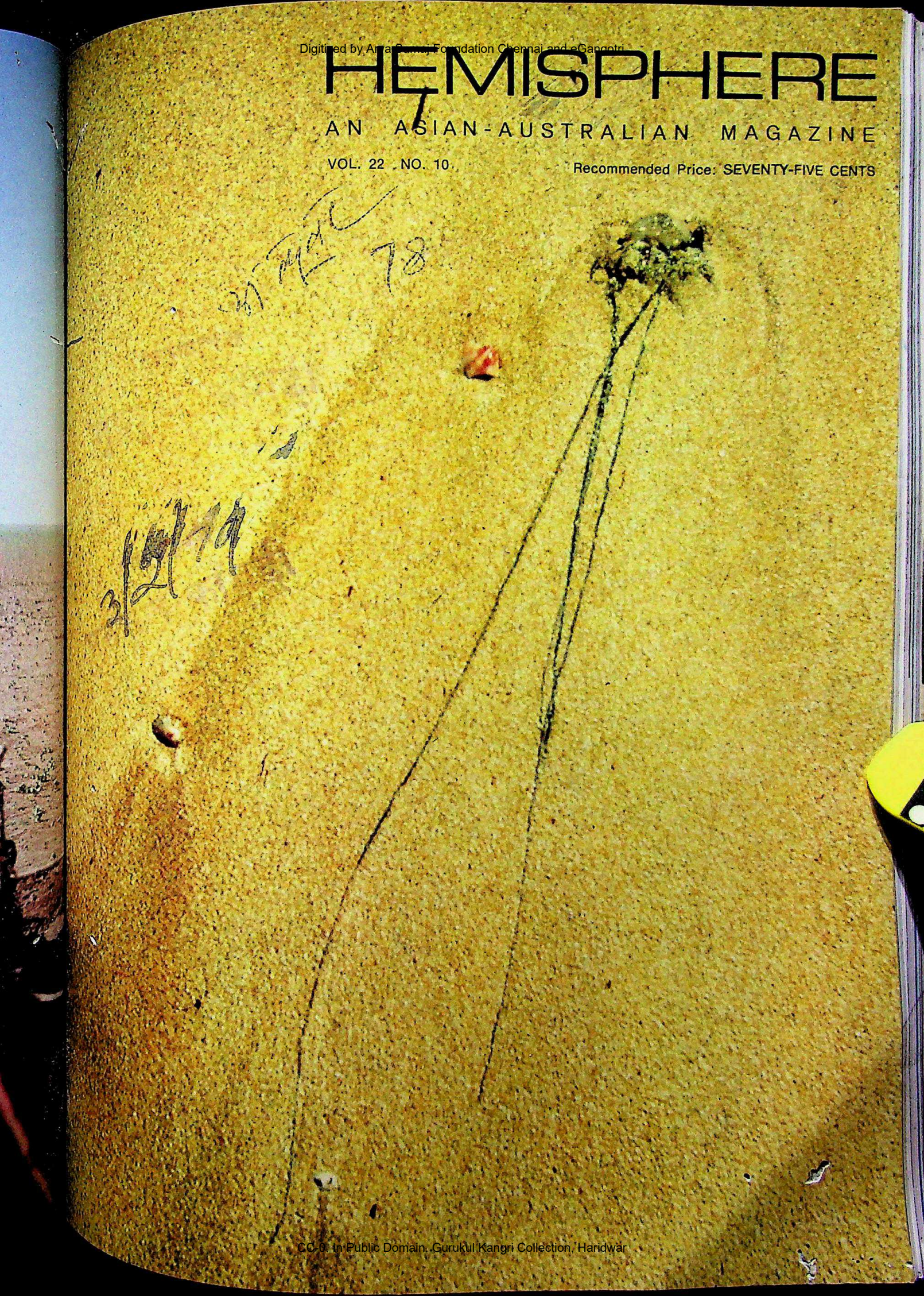

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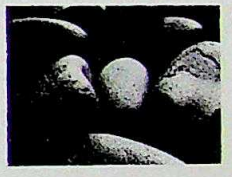

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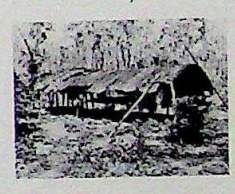

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COVER: *Beach detail. (Photo: Don Morrison).*

OPPOSITE: *Footpath, Canberra City. (Photo: David Reid).*

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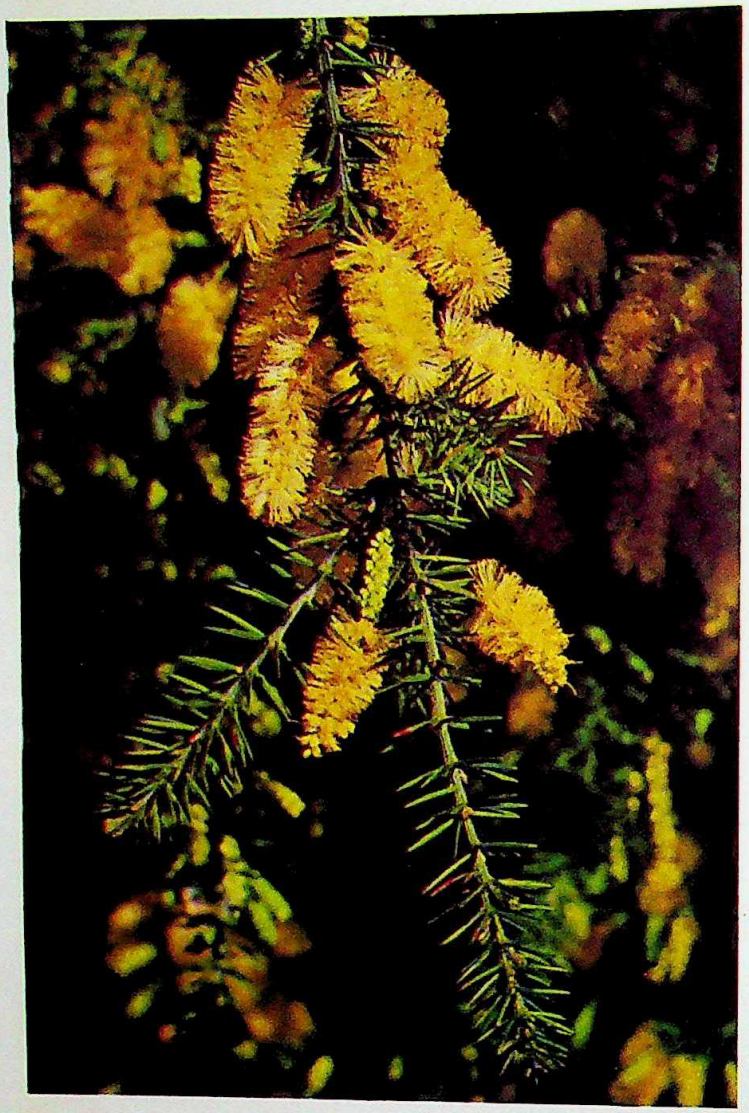
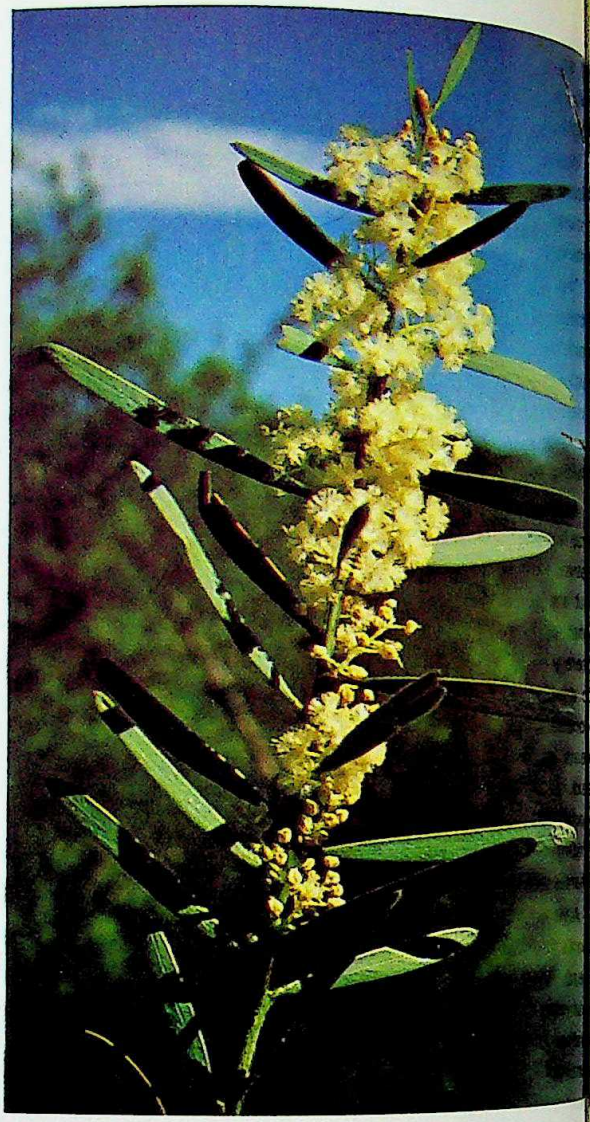


Acacia verticillata, *photographed in the Canberra Botanical Gardens.*



Acacia suaveolens, *at Hazelbrook, New South Wales. photos by R. Goldsack).*

ACACIAS—WATTLES

Carolyn Pettigrew

THE golden yellow which breaks the monotonous olive green of the Australian bush belongs to the wattles. So spectacular are they that one species, the Golden Wattle (*Acacia pycantha*), was early this century chosen as Australia's national floral emblem.

Wattles came to be so called because their flexible saplings and branches were used by the early Australian settlers to build cottages. The old English term 'wattle' was used to describe any flexible twigs interwoven to form a shelter, and then covered with mud—hence 'wattle and daub'. Actually the plant most frequently used for this purpose was not an acacia at all but Callicoma serratifolia, known nonetheless as Black Wattle.

Botanically wattles are known as acacias. There are over nine hundred recognised species and some six hundred and fifty of them are found in Australia. Wattles also grow naturally in the Indian sub-continent, the drier parts of Africa and in South America. But the greatest variety

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species is seen in Australia, ranging from ground-hugging *Acacia cuneata* to stately trees like *Acacia* ...ococarpa.

Wattles are the most widely distributed of all Australian ...ants, growing almost everywhere except on the coldest ...ountain tops. In the arid regions of Australia their foliage ...rovides food and shade for many animals.

The Brigalow, *(Acacia harpophylla)* dominates the ...range pocked gilgai soils of Queensland; *Acacia coriacea* ...ust have been one of the first plants examined by Dutch ...xplorers on the beach front of the harsh north-west ...oast. However, almost all of the tall tree species are ...nd in the forests on the seaward side of the Great ...ividing Range, on Australia's east coast.

Australian wattles form two distinct groups: those with ...e leaves which are soft and feather-like, and those with ...eaves reduced to phyllodes. Phyllodes look like leaves ...t are really flattened leaf-stalks. It is difficult to say ...hat advantage, if any, this gives the plants. However, ...here is some suggestion that phyllodes are more resistant ...o drought, a reminder that wattles were important com-...onents of the flora during periods of aridity millions of ...ears ago. Phyllodes vary enormously in size, shape and ...exture. Those of the Queensland Silver Wattle *(Acacia ...odalyriifolia)* are covered in soft velvety hairs, those of ...rickly Moses *(Acacia ulicifolia)* are short, narrow and ...harply pointed.

Although wattle blooms are quite conspicuous, single ...attle flowers are very tiny, being no bigger than a match-...ead. The fluffy yellow flower balls are really clusters of ...umerous small flowers packed tightly together. In other ...attles the dainty flowers are not in flower-heads but ...rranged in cylindrical spikes. Pollen grains from the ...owers are large and heavy and it is unlikely that they ...re carried far by the wind. The widespread belief that ...attles are a common cause of hay fever should be re-...ised; lighter, wind-borne grass pollens are much more ...kely suspects.

Because wattles grow quickly and flower profusely, they ...re very popular for home gardens. At least one species ...f wattle will be flowering every day of the year. Indeed ...t is possible to grow an assortment of species in a home ...arden so that blooms are always present. But wattles ...re also attractive to destructive insect pests: to wood-...borers, which eat out the soft heartwood of stems and ...branches, and to wasps which induce weirdly-shaped galls ...on plant cancers.

Most people would consider bush fires a menace. Yet, ...ke many Australian plants, wattles depend on fire for ...heir reproduction; a grove of wattles is a good indicator ...of a bush-fire some years past. Fire cracks the wattle's ...hard seed coat and allows the enclosed embryo to emerge. ...Ants also help in the germination process. The fleshy ...seed stalk exudes a chemical which attracts many different ...species of ants. The ants then collect the seed and even ...though they are not able to crack the seed coat them-...selves, they nevertheless bury the seed in their storage

Acacia hubbardiana, *Canberra Botanical Gardens.*

Above: an Acacia saligna; *below: an* Acacia myrtifolia.

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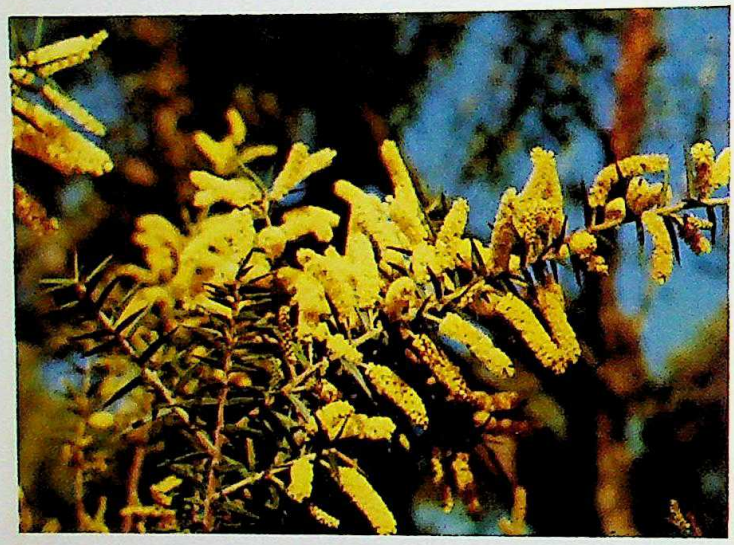

holes a few centimetres below the soil surface. He seeds are protected from foraging birds and other anim but spring to life if a bush fire passes over.

Wattles play an important role in the ecology of Australian bush. In common with other legumes they natural fertilisers of the soil. Bacteria living clo associated with the roots of some species take nitro from the air and convert it into useful compounds w plants can utilise. A myriad other bacteria and f also live in the tangled mass of roots. These mi organisms form part of a forest's natural defence f against parasites and disease. Scientists in Western A tralia believe that wattles and other legumes are impor in the control of die-back in jarrah forests; die-b disease being caused by the fungus, *Phytophthora* c *namoni*. Too frequent, low temperature burning kills wattles and their micro-organisms, leaving the mi jarrahs vulnerable to attack by Phytophthora, which taken over in the absence of competition.

Research on the biochemistry of wattles is be carried out in various centres throughout the world. wattles are important fodder plants, several investigati are being carried out to find ways of making the lea and phyllodes more digestible for ruminant animals. T examining of leaf and seed proteins, and amino ac is contributing to an understanding of the evolution these biological building blocks. In the future, modern genetic techniques, it may be possible to tran the genes which control production of these substan to other legumes. Many legume seeds have a high content but are low in nutritionally important amino-ac Transfer of the genetic material would improve consi ably the food value of these plants.

Man has found wattles useful. The Aborigines used th for making spears, boomerangs, digging sticks and o implements. Pale amber gum from branches and tru was eaten and seeds crushed for flour. Boree, m mulga, brigalow, yarram, cooba, miljee, gidgee, c rawong, wallowa are all wattle names which suggest h important these plants are to the Aborigines.

Wattles have many commercial uses. Beautiful tim for cabinet making is derived from the majestic Blackw *(Acacia melanoxylon)* and mulga wood tourist cur carved from the reddish-brown heartwood and yellow s wood of *Acacia aneura*, never seem to lose their po larity. Mulga is also an important source of fodder du times of drought in semi-arid regions. Australian wa are grown in France for the perfume industry. Black Wa *(Acacia mearnsii)* and Green Wattle *(Acacia decurrens)* a two of the best known wattles for producing tan-bark.

THE AUTHOR: *Dr. Carolyn Pettigrew is an interpretations of in the New South Wales government's National Parks a Wildlife Service.*

Left, from top to bottom: Acacia spectabilis, *Hornsby, N South Wales;* Acacia Oxycedrus *and* Acacia Vomerifor *Coonabarabran, New South Wales.*

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Sailing Down The Bay Of Ise

Astern, I watched the wake unwind
A scroll on which the sunset drew
Molten calligraphy, and signed
The wash that it incarnadined
Along this bay of silken blue.

The oppressive sun had now resigned
Its burning power, and set at last
A seal whose crimson fire declined
On smouldering clouds, which overcast
The port dissolving in the past.

I looked to starboard on a view
Where shaded foothills were defined
Against the hazier peaks behind
In serried ranges, dimmer through
Evening veils of lilac hue.

To port the coastline, close at first,
Now broadened out in cove and cape:
A shoal of islands lay dispersed
Within a bay, whose narrow gape
Had let some fins of rock escape.

Ahead, the topmost sails of white,
Against the offing's twilit frieze,
Climbed the horizon into sight:
The fishing fleet had caught the breeze
Nearing their haven for the night.

To front the sea, a sheer-cliffed isle,
Conifer-crested, reared its pile,
Ruining down in tumbled blocks
To where a village, roofed with tile,
Twinkled among the leeward rocks.

Passing between the harbour's wide
Headlands and out to open sea,
The eager ship began to ride
The dip and swell of incoming tide,
As space and darkness set it free.

Soon from the bows I could behold
The lunar pearl of pallid gold
Out of nocturnal depths emerge,
Until its radiance had unrolled
Nacreous scriptures on the surge.

Oh, as the Sun burns out and dies
Within my body, may the glow
Of Moon-illumined wonder rise
In my benighted mind and glow
Immortally serene and wise!

HAROLD STEWART

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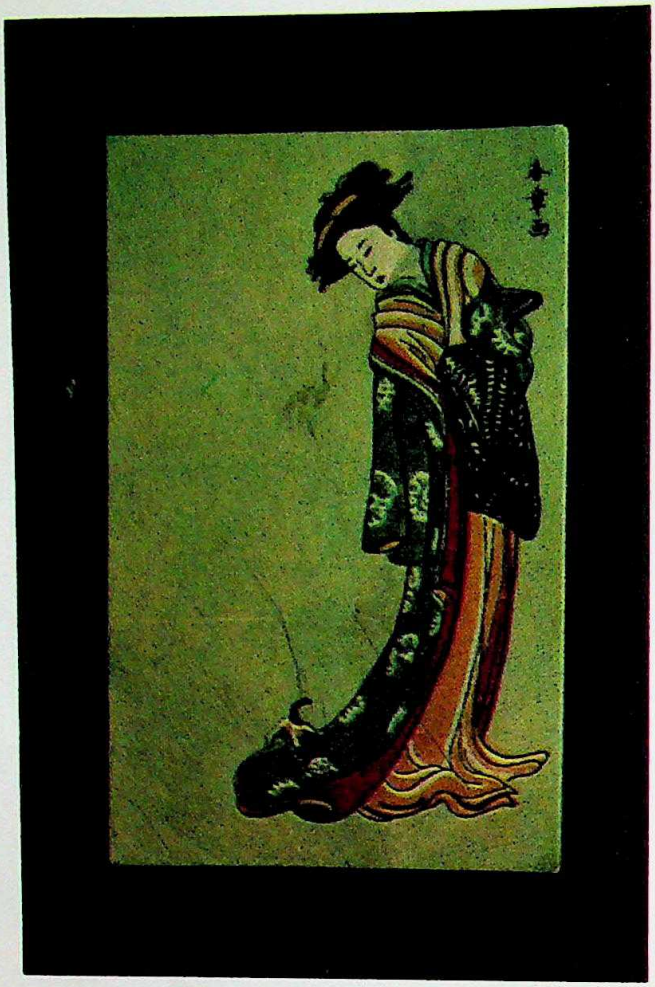
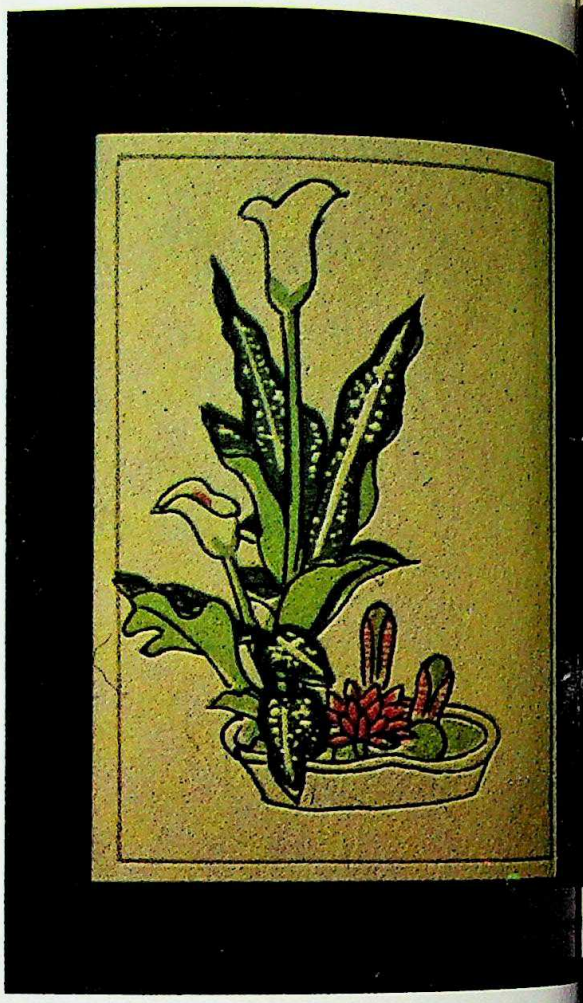


A match-box cover reproducing a woodcut by the print master, Utamaro.



One of a set of twelve labels showing bonsai, *or tree-dwa*
(All photographs by the author).

THE LABEL ON THE BOX

Paul R. Aldrid

IN 1875, Makoto Shimizu succeeded in the trial production of sulphur matches at Mita, in Tokyo, and in September of the next year he established a factory named *Shinsuisha* at Fukagawa, also in Tokyo. This was the first match factory in Japan.

In the century since then, countless millions of match boxes of various shapes and sizes have been manufactured and filled for export and for domestic use. Each of the containers has been labelled.

Though the earlier wooden boxes have gradually been overtaken by cardboard packaging in the form of skillets or booklets, there has always been a strong demand among collectors for the labels, the wrapping around skillets, or the opened booklets. The collection of ma box labels is world-wide. Like its companion hob philately, it covers general, specialised or them collecting.

Labels that are simply rectangles of paper that be soaked off the box have been printed from wood or by present-day methods, in a single colour o many colours; by hand-rubbing or photographic re duction; and in various sizes covering miniature bo the familiar domestic box, packets of ten, a dozen, gross of boxes, or large boxes used in kitchens.

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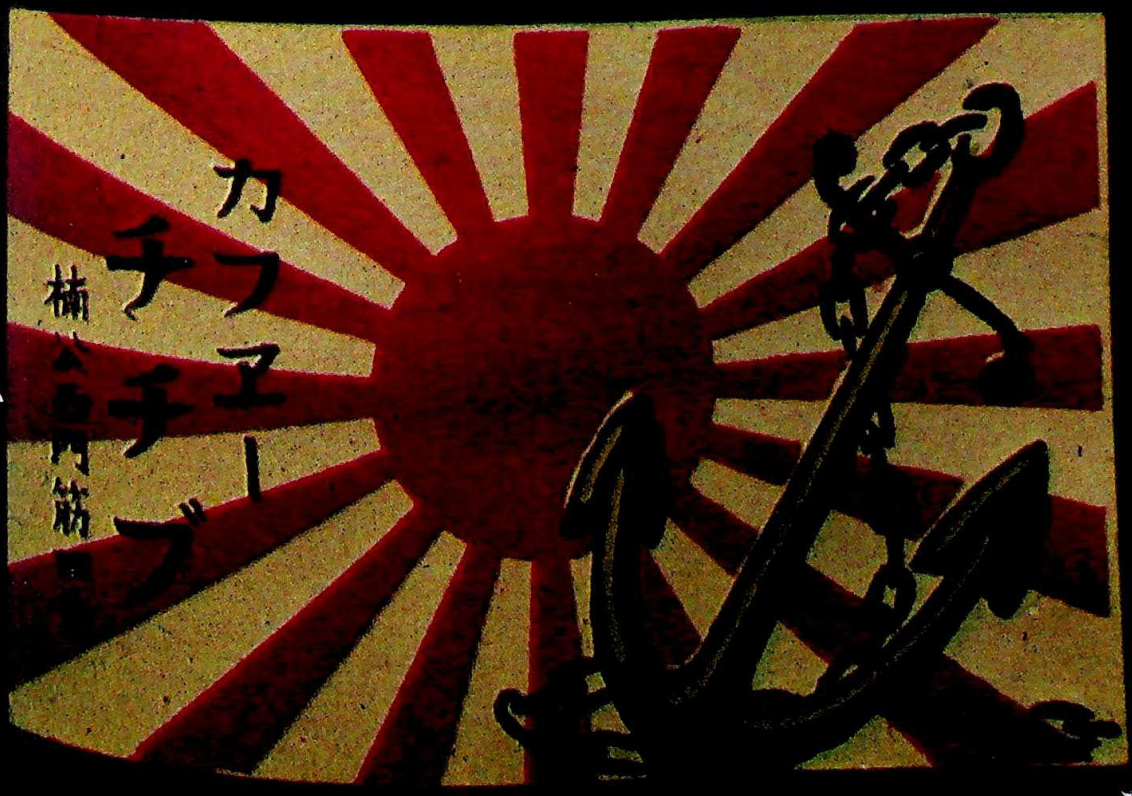
...e of a set of twenty labels depicting fish specialities of various restaurants, and a pre-war flag, presumably linked with the Navy.



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Two advertisements for hotels: Above, one for the Tokyo Restaurant at the Imperial Hotel, Hong Kong; below, a give-away for guests at the Tokyo Station Hotel.

Japanese labels produced before the two world w... are now extremely hard to obtain and are highly pric... Fragile little pieces of paper, they were lost to spec... collections through earthquake, flood, fire and conflict.

In the past century, Japan's beautifully produced lab... have depicted many subjects: legends and fairy ta... paintings, engravings and calligraphy by Old Maste... *origami* and flower arrangement, karate and sumo; fam... theatrical entertainers and costumes from *Kabuki* and ... plays; festivals, castles and feudal baronial crests; a... of course, scenic beauties.

The more common type of label is produced with... companion labels to form a pair or a set. When multip... or sets are issued, great interest is shown by the pub... and, especially collectors.

Japan has excelled in producing sets, some on... special theme or forming an independent miniature co... lection. Beautiful labels forming sets reproduce wo... by such artists as Hokusai (1760-1849), Hiroshige (17... 1858), and Utamaro (1754-1806).

An example of the resourcefulness and ingenuity ... the Japanese match manufacturers is the combination ... a number of different labels, usually four. Each is ... itself incomplete, but when all are placed together ... correct sequence they form a picture, usually with ... corners of a square at the top and bottom.

Between 1872 and 1972 there were about three hu... dred match manufacturers in Japan. At present the... are about eighty. Earlier labels carried the name of ... manufacturer or factory and serve to date the issu... Special export labels were designed, and the use ... foreign words increased with the change from a fe... to an expanding commercial society in Japan. The ma... manufacturers delved into English enthusiastically, w... remarkable results in spelling. For the domestic ma... there were recurring designs that became symbolic ... an expanding industry.

As one of the foremost printers of labels, Japan so... had standing orders from other countries to supply labe... for boxes made and filled elsewhere. Sweden, India a... China availed themselves of this service. The labe... bore legends such as 'Made in Sweden' or wherever t... contents were made. Overseas countries sought Japane... consignments of complete boxes, suitably inscribed. ... advertise their stores and establishments, no mentio... being made of Japan.

Makoto San's factory operated until 1902, and a fe... of his labels have survived. He favoured monotints ... red, blue and black. There have, since his day, be... labels printed on hand-made paper in most colours, a... on papers of different textures and tints, with m... stripping and even metallic surfaces. National heri... have been portrayed on labels. Historical events, change... of fashion, and distinguished military and naval figure... have been featured.

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The Japanese have reason to fear fire, but they are enthusiastic users of matches in preference to cigarette lighters. The trend in the last few years has been to use boxes of skillet type. A skillet is a cardboard box on which the label has been printed before it is folded into shape. Most Japanese do not favour match booklets.

No other country has made greater use of the match-box as an advertising medium than Japan. The limitation of space imposes a discipline that often deprives the designs of wit, imagination or impact, but the exceptions reveal the great skill of the Japanese commercial artist. All manner of businesses, large and small, provide 'service' matches free to customers, who simply pick up a box from baskets placed on the counters of stores, shops, hotels and cafes.

The Match Label Collectors Society of Japan holds each year a competition for labels members have designed and had printed as token gifts for each other. Between 1929 and 1931, there was a vogue for such personalised match labels to commemorate anniversaries, weddings, birthdays, changes of address, social gatherings and the return of travellers.

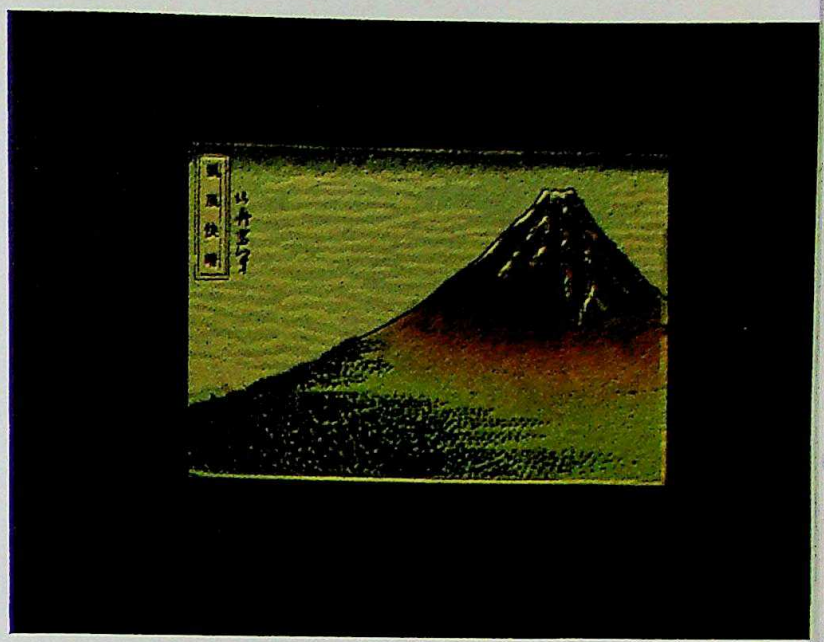
Wartime labels are very scarce, and those that collectors do acquire are usually in a dilapidated condition. Japanese labels of an earlier vintage are almost impossible to collect, as I have found in four visits to Japan and to twenty-eight match manufacturing companies. Antique and book shops, the next most likely source, have also proved unpromising. However, Japanese collectors have come to my rescue, and one old Japanese, a recognised authority and collector, has said my collection is perhaps the best owned by a foreigner.

Japanese manufacturers have pioneered the packaging of matches in containers representing miniature cars, trucks, trains, trams, buses, ships, submarines, houses, people, flowers, toys and calendars. They have developed match heads in pastel shades of many colours, and the match sticks are often coloured to contrast with the heads and harmonise with the labelling. The striking surfaces on boxes have also received the artists' attention and been attractively redesigned.

Japan was also the first match-producing country to issue boxes made of coloured plastic and devoid of labels: the brand inscription is incorporated in the moulding.

Though the match-box is a disposable product, it has endless interest for a phillumenist. He has no hard and fast rule when he is mounting his label collection. The method is carefully to soak the label off, dry it, and fix it with a stamp hinge on an album page.

THE AUTHOR: Paul R. Aldridge is Past President of the Sydney Phillumenists Club, a member of the Australian Match Cover Collectors Society, and an honorary member of the Japan Match Label Collectors Society.



A reproduction of a famous woodcut: one of the series of Forty-seven Views of Mt. Fuji, by Hokusai, and one of a series showing Sumo *wrestlers.*

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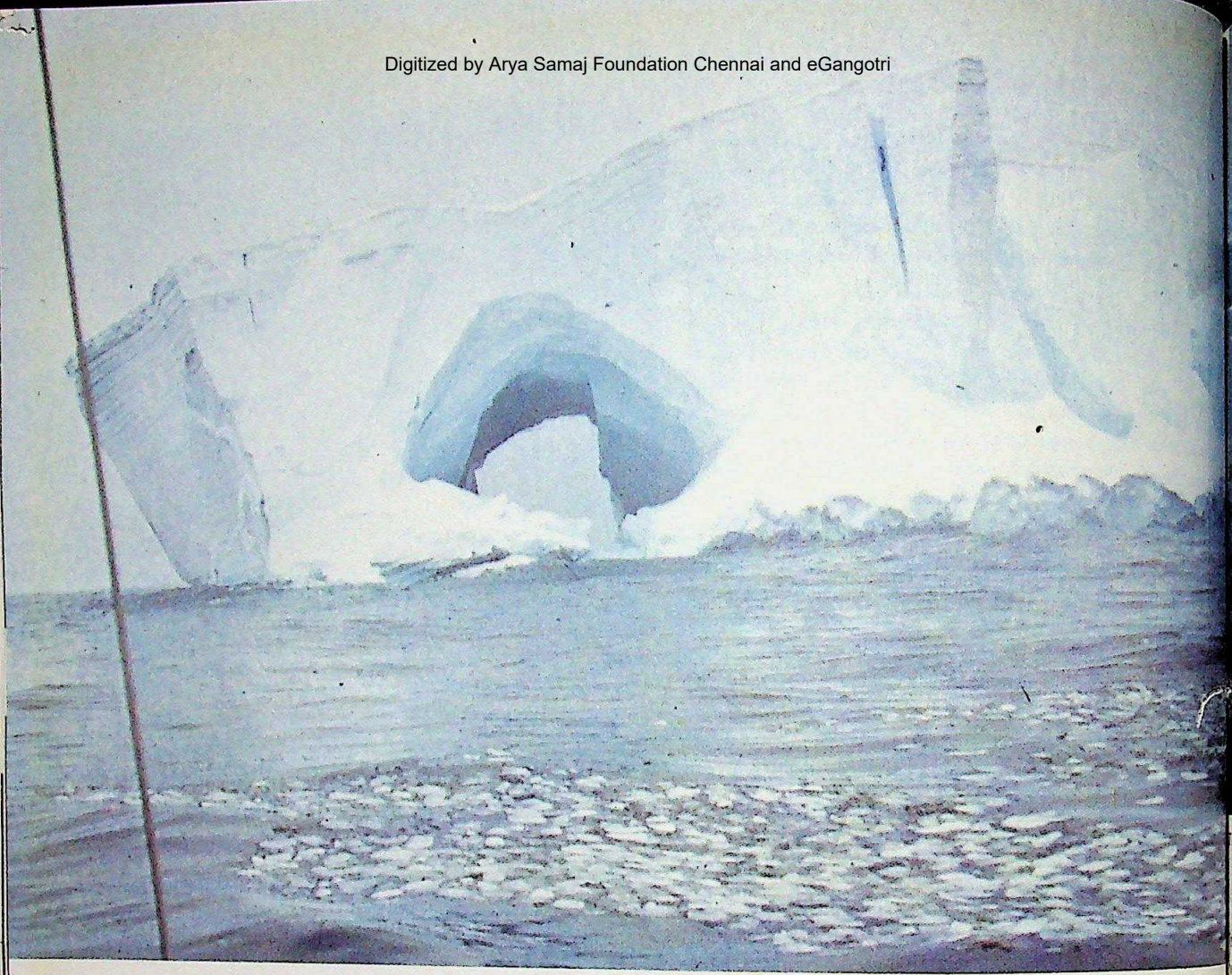

A 'flawed' or weathered iceberg.

ICEBERGS IN THE TROPICS?

Article and Photos by Peter Donaldson

WE are now beginning to realise that the Earth's store of minerals, water and energy is exhaustible. Resources are not distributed evenly, so that while some areas have abundant minerals or energy they lack water. Droughts and spreading deserts are meanwhile affecting agricultural yields. Water is greatly needed throughout the Middle East, in parts of Africa, South America, Southern California and Australia.

In trying to solve these problems, many scientists, lay people and businessmen have been stimulated by the immense volume of fresh water present as ice. Less than one per cent of the world's fresh water for human use is located in rivers, lakes, marshes and underground; the remainder is frozen in icebergs, glaciers and polar ice-caps. Ninety per cent of this ice is in Antarctica.

Instead of costly and energy-intensive desalinatio why not tow icebergs to arid regions and pump t melted water ashore? Fanciful? Perhaps not. Betwee 1890 and 1900, small icebergs were towed from Chile t Peru, a distance of up to three thousand nine hundre kilometres, to supply ice before the days of refrigeratio However, the first serious scientific proposal for iceber utilisation is much more recent. Twenty-four years ag John Isaacs of the Scripps Institute of Oceanograph U.S.A., studied the concept but, fearing ridicule, he d not publish; however, the editors of Time-Life decided t use it in their book *The Sea* in 1961.

Today many scientists are taking the idea very seriousl indeed with an international conference meeting last yea

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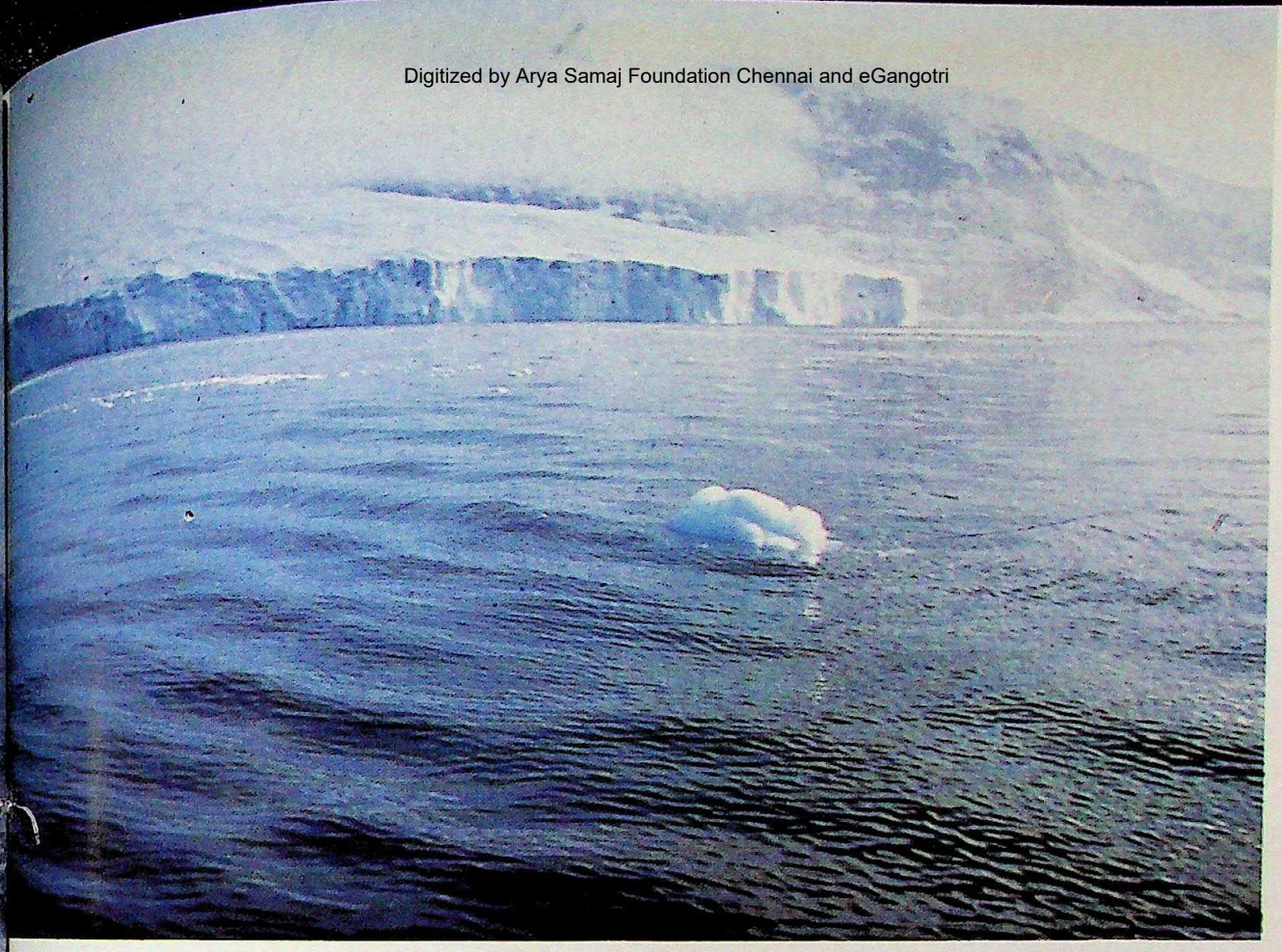

The Antarctic ice shelf, seen from the yacht Solo, *in which the author travelled to the Antarctic earlier this year in an eight-man expedition led by David Lewis.*

n Ames, Iowa, devoted entirely to iceberg utilisation, eather modification and other applications. The major onference sponsors were Saudi Arabia and the U.S. tional Science Foundation. H.R.H. Prince Mohammed l Faisal, Governor of the Saline Water Corporation of udi Arabia is particularly interested. Desalination curently supplies his country with almost all of its drinking ater. As industrialisation of Middle Eastern countries roceeds, more water will be required. The highly-polluting esalination industry is energy-intensive with escalating uel bills approaching seventy per cent of the total costs. evertheless within six years Saudi Arabia plans to produce up to two million cubic metres of fresh water per ay by desalination. Unless reverse osmosis desalination eviates the situation, iceberg towing could be a viable ong-term alternative.

Icebergs also have considerable potential as weather odifiers. In the Middle East an iceberg of two hundred illion tonnes could cool a light breeze close to the round on a ten-kilometre front by up to five degrees uring five months. Thus substantial reductions in aironditioning in cities are possible. In the Red Sea the oastal atmospheric humidity approaches ninety per cent the summer: if fogs were formed from iceberg-cooling ir, then a much greater temperature drop would be ely through thermal shielding of the sun's rays.

Of the ten thousand icebergs that break off every year om Antarctic iceshelves, ten per cent would supply drinking water to an urban population of 1.7 thousand million at the rate it is consumed in London. Furthermore, this source of water could be most dependable. Antarctic icebergs, being narrow, tabular and stable, would be more suitable for towing than their irregular Arctic cousins. The projected removal of a small percentage of icebergs is considered to have little or no ecological effect in the Antarctic.

Proposals about ways of using icebergs have changed greatly. Originally an iceberg was to be found south of Chile, towed into the cold Humboldt current and floated up the coast to Chile or Peru. There it would be manoeuvred into an inlet and a fabric curtain suspended across the mouth of the cove. Pumps and pipelines would then distribute the melted water to the dry but fertile surrounding land. This simple but probably naïve notion has rapidly been expanded into a global proposition. Unit costs decrease inversely with size and icebergs are no exception. Why not tow a large iceberg to other regions, say, Australia, or even across the equator to California or the Middle East?

If the scientific problems can be visualised, the engineering difficulties are frightening. Immense, fragile, shrinking masses of one hundred to one thousand million tonnes must be towed for months in rough seas across thousands of miles. But the problems have only begun: what happens when the monster finally arrives at its destination? Icebergs are usually about three hundred

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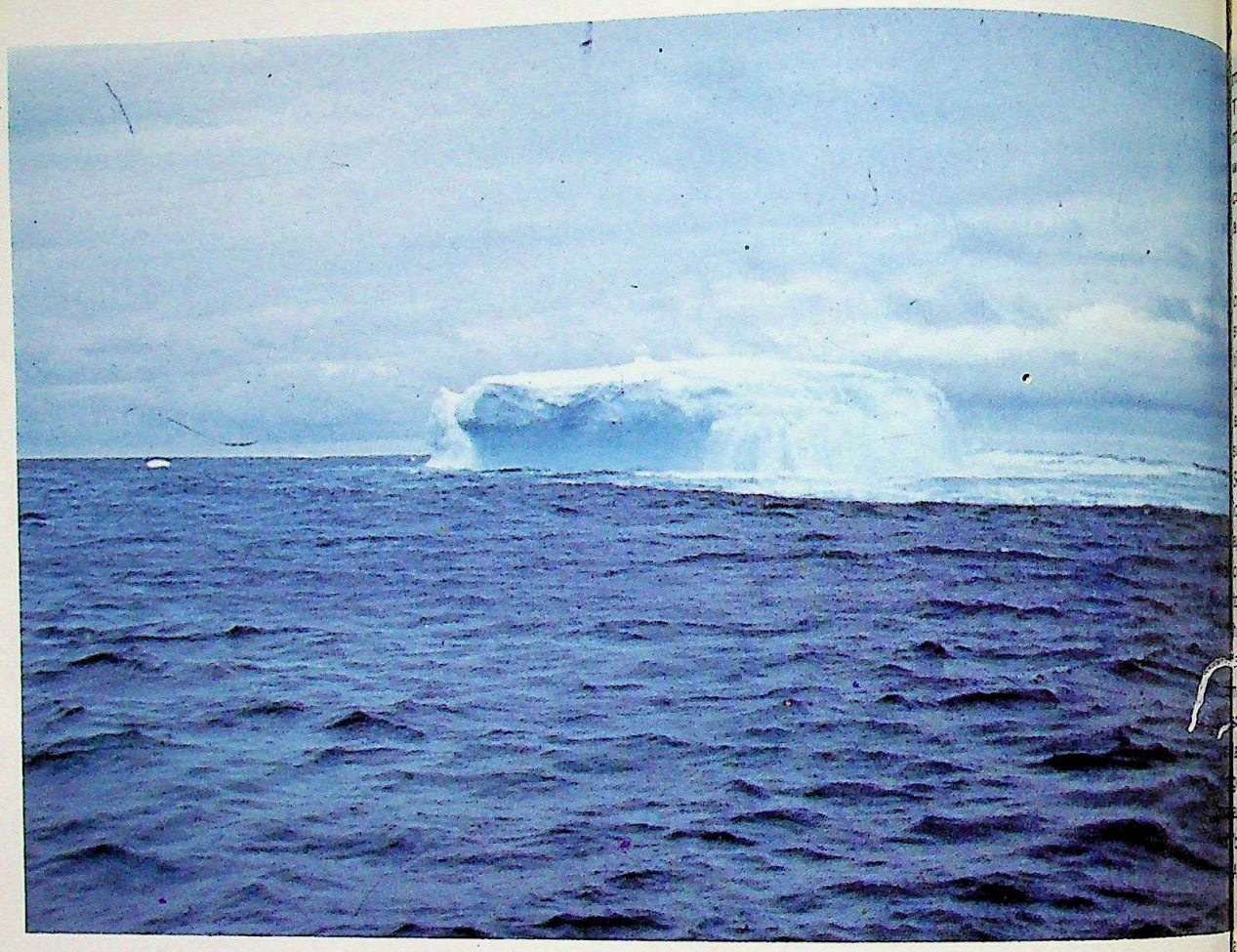

An iceberg worn by waves, and one still more weathered, and tilting.

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metres thick, so they cannot be towed close inshore. Thus they must, at least partially, be used many kilometres from land. Furthermore, the uncontaminated melt water must be delivered at a rate of at least tens of cubic metres per second and at a total cost not exceeding a few cents per cubic metre.

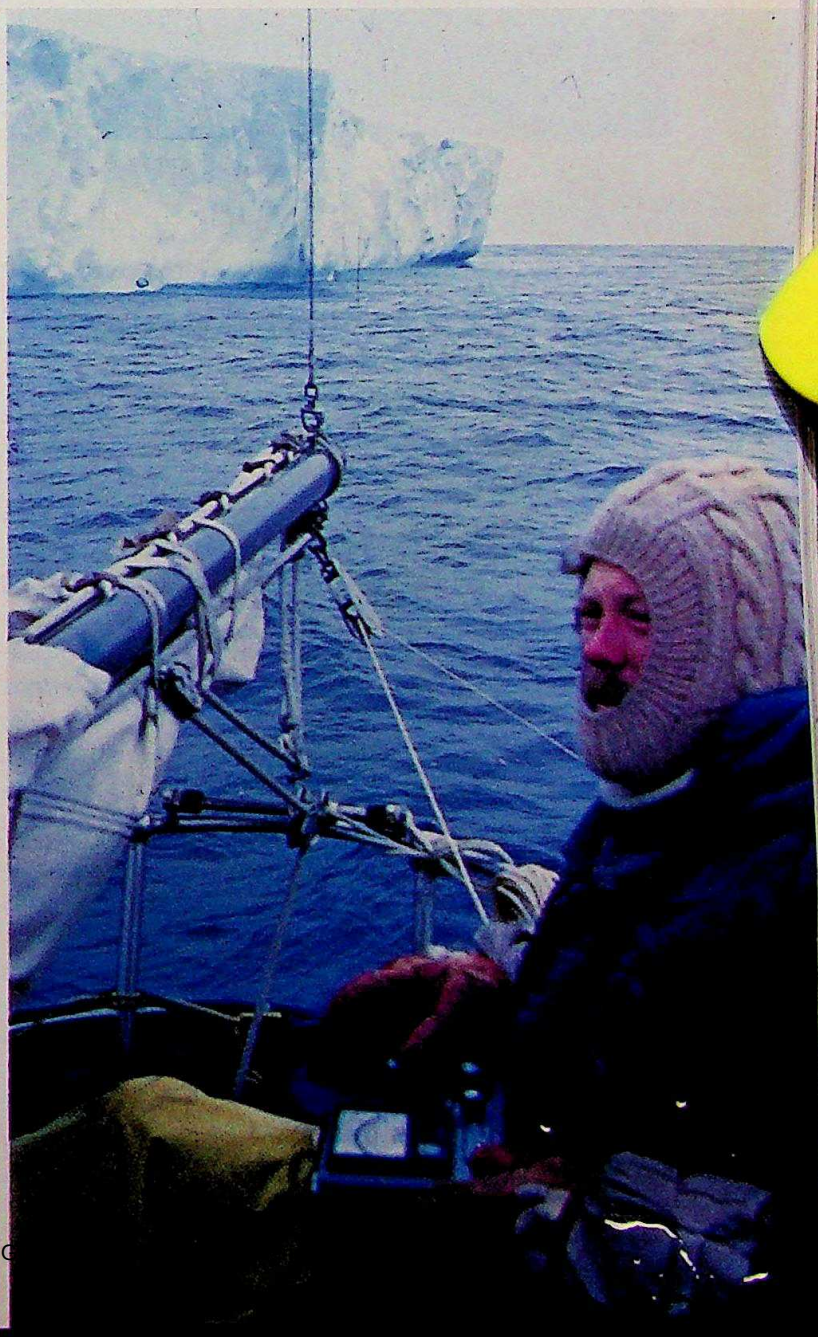
Before any iceberg is towed, some estimate of the rate of melting or deterioration must be known. Calculations suggest that icebergs can be towed to southern continents but insulation is necessary for longer distances. However, it is likely that these studies may not include all methods of ablation correctly. Thus in the Antarctic summer of 1977, while on board the eighteen-metre yacht *Solo* (see *Hemisphere* August 1978), I attempted to gather iceberg deterioration data. Despite our being able to approach much closer to icebergs than large vessels would, the results were inconclusive: either little melting took place or rapid mixing of the sea and melt water happened. It was quite obvious, however, that a major factor in iceberg ablation is cracking or calving. Two main types were noticeable. Waves can cut a groove around the waterline and then the overhanging ice collapses or internal stresses can form huge cracks allowing great chunks of ice to shear, creating much danger to any craft nearby. These house-size iceblocks, known as 'growlers' or 'growlers' are a considerable hazard to Antarctic shipping.

To insulate an iceberg is no small undertaking. For an average-sized, smooth, regular iceberg of dimensions three hundred by five hundred by two hundred and fifty metres, the total surface is two and a half million square metres; the total volume of one hundred and eighty-seven and a half million cubic metres and the mass is approximately a hundred and fifty million tonnes. The top surface (three-quarters of a million square metres) may relatively easily be protected by insulating the perimeter and allowing the sun to melt a pool of water. Evaporation will maintain good insulation. The other sides are a completely different proposition. Nearly two million square metres of insulating material must be spread and pinned closely to the ice. It is unlikely that the cost of the material in this giant blanket will be less than one US dollar per square metre.

Proposals for attaching the insulation are varied but the idea is as follows: to protect the sides by long strips of material which could be unrolled from the top of the iceberg and pinned at depth. A huge sheet of material large enough to insulate the bottom could be folded around a drum like a venetian blind and towed to the Antarctic. There it would be sunk to clear the iceberg. After fixing one end by straps to the upper ice, tugs could tow the submerged material, allowing it to unfold. With refloating the drum, the other end could also be attached to the ice.

Tremendous problems need to be overcome before any such plan can succeed. Icebergs are not particularly

The Antarctic ice shelf, with broken masses of ice floating away as icebergs, and the author, measuring salinities near a tubular iceberg.



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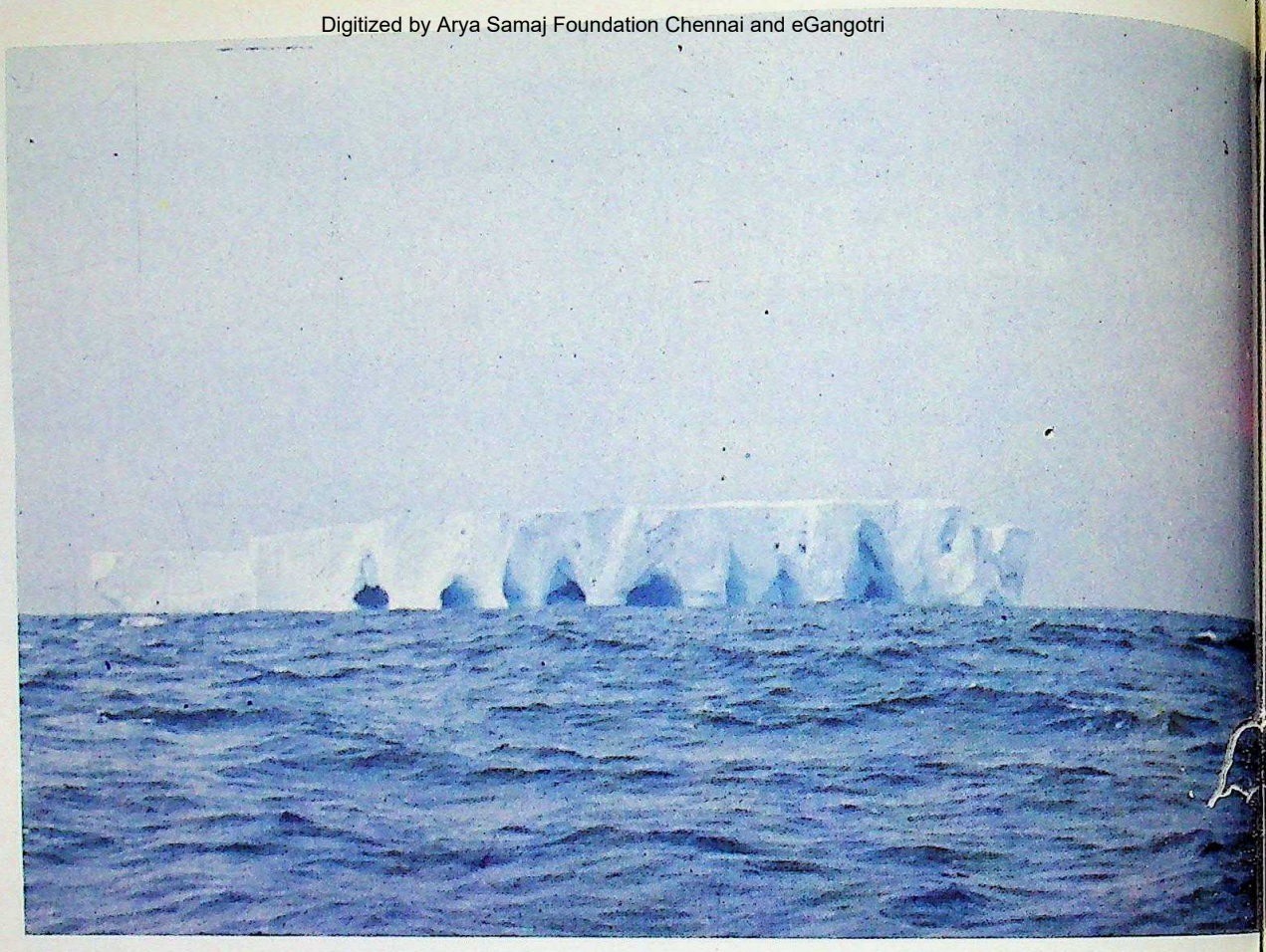

A tubular iceberg with melting and carving ablation evident.

regular and any gaps in the material will result in large-scale melting and subsequent slabbing. Calving must somehow be contained, as the insulation would be shredded by the falling ice.

Let us assume that we have solved these problems and are ready to tow. First, we would require tugs that can deliver power approximately equal to that of the carrier USS *Enterprise.* Today's tugs are meant to operate at high speeds, so that a new design which delivers good power at 0.1 to 0.5 metres per second is needed. Bollards would then be melted into the hard snow on the iceberg top for tow lines. If the force of the tow causes plastic deformation or melting around them, a net or cradle could be assembled around the iceberg's stern. A relatively narrow iceberg would be a good towing choice. The bow and irregularities could be shaped by a hot wire as discussed later.

Overcoming rough seas, hot winds, Coriolis force (a tangential force caused by the Earth's rotation) and fickle currents, the iceberg finally arrives somewhere off Jeddah, Saudi Arabia. No cause for celebration, though, as a new job begins. As the icebeg will not pass through the shallow Bab El Mendeb Straits, it must remain out in the Aden Gulf. How then can a great chunk of ice, kilometres offshore, be converted into usable water? One plausible suggestion is to cut it into slabs with weighted heated wire. To prevent refreezing (as the interior of the iceberg will still be about —10°C) a sh of plastic must follow the wire. The slices could th be towed closer inshore and melted by the sun. Anot seemingly more simple suggestion involves building narrow skirt around the iceberg. As the lighter fresh wa rises up the sides on melting it would be trapped a pumped off. Model studies suggest that this is unlik as rapid mixing or layered melting generally occurs. addition, my attempts to detect any less saline water clo to icebergs were unsuccessful, too.

The great social and economic advantages lead peop to try to overcome such difficulties. A large iceberg co contain water worth a hundred million US dollars in so areas. Glaciologists have calculated that unprotecte icebergs could be towed to Australia. If only fifty per c of the water is used, the plan would still be profitab Both South and Western Australia are in need of wat The water supply to Perth is erratic with summer usag restrictions often enforced. South Australian Murray Ri water is not of good quality and worsens yearly salination through upstream leaching occurs. Calculatio suggest that less energy may be expended in transporti ice to California than that required to pump the equivale amount of water through aqueducts to Southern Californ In 1977 the French consultants CICERO estimated t following costs for the towing of icebergs to the Midd East compared to the cost of desalinating sea water.

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The Midnight Sun behind the iceberg.

	Large berg ($1 \times 10^9 m^3$)	Medium berg ($5 \times 10^8 m^3$)	Experimental berg ($1 \times 10^8 m^3$)
Daily water production ($\times 10^6 m^3$)	2.2	1.2	0.2
Oceanic transfer costs (cents m^{-3})			
At Aden,			
Slicing	6	7.8	31.2
At Jeddah	14.2	15.4	21.5
	20.2	23.2	52.7
Investment required ($\times 10^6$ US dollars)			
Iceberg water	657.5	405.5	88.4
Desalination water	1800	1064	200

These figures indicate that, although the cost of transporting icebergs may not be great, cheap means of releasing the water are needed. Despite this, iceberg melt water should still compare favourably with desalinated water which requires immense plant and investment.

Perhaps the major companies currently interested in iceberg utilisation are *Application, Concepts & Technology Association of California* and *Iceberg Transport International* of Paris. The latter company supported by Saudi Arabia and its non-profit foundation sister, *Icebergs for the Future*, are currently planning scientific projects associated with the venture. Scientists from many countries are collaborating with them to research iceberg deterioration and movements, Southern Ocean currents and global wind patterns. These last two topics will also receive great attention during the World Weather Watch this year through the use of satellites and weather buoys. Plans are also in hand for the close study and tracking of an iceberg over a prolonged period in the Antarctic, possibly even next summer. Many other scientists in seemingly diverse agencies, such as NASA, the British Antarctic Survey, the Rand Corporation and the US Coast Guard, to name but a few, have their own plans. Australia undoubtedly has a strong vested interest in iceberg-towing proposals. Accordingly, scientists in universities in South Australia and Canberra, plus glaciologists in Melbourne, are actively collaborating with the French. Prince Mohammed Al Faisal announced last year that he would cooperate with any country or group interested in the utilisation of icebergs, no matter their destination in the first instance. Australia or Chile could be the first destination for test icebergs and towing could commence within five years.

Perhaps this vast concept, which to many people is still an eccentric or absurd idea, will be a bonanza for the human race. If not, then at least much interesting and useful information about the southern seas, weather and engineering must result.

Scotch on the ten-thousand-year-old rocks could be an interesing possibility for the future!!

The writer is a Research Fellow in Chemistry, the Australian National University, Canberra, and a Member of the Oceanic Research Foundation.

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LEAVE ME ALONE, BUT . . .

W. R. Finighan

An Indonesian friend once described his concept of privacy by saying 'When my finger touches the tip of your nose I am interfering with your independence as a person.'

The limits of communication were discussed by Geoffrey Caldwell in *Close-wrapt Souls* in *Hemisphere* last January. He was talking about limits to human communication which are more or less self-imposed, just as our present writer, Rick Finighan, makes the very big difference between Robinson Crusoe, who suffered from isolation, and the person who, for a long or short time, wants to keep himself to himself, not to reveal what he does not want to tell about himself, or in quite another way, to take a long solitary walk; perhaps to sit in a chair and read a book without interruption from noisy neighbours.

The wider use of the computer can mean the storage of information about people longer than men's memories. A person may not get a job because of some long-past peccadillo or a minor illness long cured that the computer has stored. Someone may not be able to get a small loan because a bad report from the credit referral bureau mentions a small debt unpaid years before.

Things in most countries could be worse, of course, but to the person facing up to what sometimes seems a hostile world ('Hell is other people', said a French writer) his situation often resembles that of the schoolchild told by an older menacingly: 'I know something about *you*'.— Editor.

OVER the last few years in Australia we have seen a quite remarkable growth of interest in protecting the right of the individual to privacy in today's urban society. People from many walks of life, including politicians, jurists, clergymen, civil libertarians and academics, have warned of the potential threats to privacy posed by recently developed electronic surveillance and information processing devices. Modern computers enable the processing, storage and retrieval of incredible quantities of information at unimaginable speeds. By feeding information obtained from a variety of sources about an individual into a central data bank a composite picture of that person can be obtained in seconds. It is not the computer's concern whether the data it receives is representative, accurate or up-to-date or whether the information had originally been supplied willingly or unwittingly for other purposes or in other contexts.

In addition, there are now readily available remote sensing devices which make it technically possible to place every person in the community under secret surveillance. From a determined intruder there is nothing which can be hidden, not even one's thoughts.[1]

A few far-sighted people have drawn attention to the ever-increasing amount of information being collected about, and in some cases demanded of, almost everyone in the community by governments, private agencies, employers, reporters, pollsters, salesmen and opinion takers. One of the first of these was Professor Zelman Cowen (now Governor-General) who in his 1969 book *The Private Man* lamented the apathy shown by the community in general towards invasions of the liberties of free men. Referring particularly to privacy he said:

> *A man without privacy is a man without dignity, the fear that Big Brother is watching and listening threatens the freedom of the individual no less than the prison bars.*

In the previous year at the National Conference of Jaycees, an organisation of younger businessmen, the St. George (Sydney) Branch presented a comprehensive report entitled 'Invasion of Personal Privacy' in which they warn that:

> *the right to personal privacy is being severely challenged by the demands of modern society in its never-ceasing quest for efficiency and conformity. The growing awareness of a few thoughtful people is not sufficient to safeguard the right to privacy. There is a need to place before our community and business leaders the challenge of maintaining the dignity of the individual in a changing environment. There is also a need for us to realise our obligations to our fellow men. Bureaucratic zeal and the pursuit of efficiency have blinded many men to the need to preserve the basic dignities and freedom of their fellows. To maintain the role of free men in a free society we must insist on the right to be let alone.*

Mr Justice Kirby, chairman of the Law Reform Commission of Australia, in a radio broadcast over the national radio network in March 1976 gave a strong warning about present-day threats to privacy when he stated:

> *Let us be quite plain that the modern danger to privacy originates in big government and big business. The danger is exacerbated by the developments in modern technology which pander to the obsession for collection of data.*

Notwithstanding the concern expressed in some quarters there is, even today, little evidence of a response by the population as a whole. In contrast, in the United States

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The claim to a legal right to privacy dates from 1890 and this was given recognition in 1905. Since then the courts have ruled on hundreds of cases in attempting to strike a reasonable balance between the right to privacy and other rights such as free speech, free press, law and order, and 'good' government. In a similar way the right to privacy is protected at least in principle in the constitution of a number of western democracies and is written into various charters and declarations of the United Nations.

In view of this widespread recognition by many countries that the individual has some sort of right to privacy with respect to others, it is of interest to consider what it is that people want to be private about and why. In other words, why do people want privacy and what do they use it for? From a sociological perspective Professor Cowen puts it very concisely:

> *A man's privacy is his safety valve, he has in it his permissible area of deviation, his opportunity to give vent to what he would not express or do publicly; within these private limits he may share confidences and intimacies with those he trusts and he may set boundaries to those confidences.* (The Private Man.)

Professor Alan Westin goes further in his book *Privacy and Freedom* (1967) in presenting evidence drawn from anthropological and natural history studies which suggests that there is a universal psychological need for privacy in humans and animals. In fact he argues that man's need for privacy may well be rooted in his animal origins and that the quest for privacy arises in the biological and social processes of all life. He sees evidence that individual and group privacy needs and the resulting rules of social behaviour are present in virtually every society which has been systematically examined.

Anthropologists have found that the level of privacy expected or extended and the way the privacy needs are expressed is related to community size and settlement patterns. For example, Roberts and Gregor[2], using data from the Human Relations Area files at Yale University found a strong association in a number of cultures between high levels of domestic privacy and high levels of political integration. However, when considering forty-two cultures with *low* levels of political integration they found high levels of privacy among those cultures keeping large domesticated animals, cultivating cereal crops, having the conceptual resources to play games involving strategy and have permanent, active and specifically supportive words.

Now a moment's thought will suggest that even though privacy takes many forms it is always concerned in some way with a control situation. Generally it concerns having control over information, control over who may know what about us but equally importantly control over what we are prepared to know about others. The term 'information' is used here to include any sensory data which can flow to or from a person. In the long run, of course, all information, no matter what its origin, must ultimately be presented as sensory data if we are to become aware of it. That is, it must be, or be converted into, something we can see, smell, touch, hear, or taste.

In most cases information is *sought* by others about the person himself or about his habits, relationships with others, possessions, or creations. Less frequently a person seeks to control the extent to which others may *impose* information on him. This situation is an important component of many forms of social relationships relating to status, dignity, intimacy and the like. It may also play a part in the way salesmen, religious and political canvassers and similar uninvited callers are treated. Frequently these 'imposition' situations are more a matter of non-directive pollution than invasions of privacy. For example, some neighbourhood noises, sights and smells may disturb solitude or seclusion but are not associated with an intention to invade the privacy of any particular person. On the other hand, sounds of quarrelling from next door may be something that a person would prefer not to hear. Summarising then, we can say that privacy concerns situations in which a person seeks, concerning information he considers to be 'private', to exercise selective disclosure or controlled access.

Focusing for the moment on the most common type of privacy situation, we could now ask why should people be interested in controlling what others may know about them? Perhaps the easiest way to answer this is to turn the question around and ask what are some of the possible consequences of not controlling what others know about us? Apart from obvious considerations of security of person and property, the most important consequence is the possibility that others will form an impression of us which is inappropriate to the particular image we are attempting to project at the time. This can influence the relationship we have or would like to have with others and may even be seen as a deviation from prevailing social norms. The consequences of this may range from being rejected by peers, associates, or intimates to the impositions of sanctions by society as a whole, such as fines, imprisonment, banishment, or in extreme cases, execution.

By controlling what others know about us we feel better able to present them with a consistent image. If necessary, or advisable, this control also can be used to conceal from public knowledge the extent of any deviation from the prevailing social norms. This not only helps others to interact with us but gives us confidence to initiate encounters with others without the fear that they know things which would falsify the image we are presenting to them. Further, by selecting the things we let others know about us, we create a buffer zone which reduces their possible over-reaction to small-scale transients of mood or temporary indisposition.

Even though privacy is commonly seen as a means of keeping others at arm's length, it is an essentially interactive concept. That is, privacy requires three components: information which a person considers to be private *vis-à-vis* others; a means of communication between the

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information and an observer; and, other people whom the person wishes to include or exclude from the privacy situation. The *achievement* of privacy lies in being able to *choose* whether and with whom we will interact.

For example, a person alone on a desert island or in solitary confinement does not have privacy: he has isolation because he has no choice as to whether he will interact with others or not. Such isolation is known to be psychologically terrifying and is used for this purpose as a most severe form of punishment. As Defoe's Robinson Crusoe cries from the heart:

> *Oh that there had been but one soul saved, that I might have had one companion, one fellow creature to have conversed with. I was alone, banished from human society, condemned to the silent life. To have seen one of my own species would have seemed to me as a raising from death to life.*

Christopher Burney in his book *Solitary Confinement* (1952) describes the terror of isolation experienced while confined by the Germans for eighteen months during the second world war. In referring to the effect of isolation he says:

> *it had so far weaned me from the habit of intercourse, even the thin intercourse of speculation, that I could no longer see any* relationship with another person *unless it were introduced gradually by a long overture of common trivialities (emphasis added).*

In our own society there are strong indications of this isolation in what some psychologists have described as 'culturally determined loneliness' or more popularly 'suburban neurosis'. In some situations people may show little concern about privacy because there is no consequence to their actions in terms of image impairment. J. W. Griffin gives an example of this in his book *Black like me* (1962). Where he describes the depths of depravity which white men revealed to him, and in his presence, in the mistaken belief that he was a negro and therefore a non-person. Mrs Trollope in her *Domestic Manners of the Americans* (1832) gives a similar example of female whites showing a lack of reticence in front of male negro servants which they would not reveal to peers or intimates. However, it would be a mistake to see privacy as a merely defensive concept. It goes beyond the idea of the comfortable, or possibly the timid, citizen retreating into the security of his home while the storms of social disorder rage outside. On the contrary man is a social being, gregarious in nature, preferring to live in a community with others. Although he needs privacy in which to practise and explore the roles he plays, or has forced on him, in family and society, in the long run life would be pointless without other players. But life's game we play with others requires that we are able to make certain predictions about them in terms of personality characteristics and how they are likely to react. And in turn, certain roles have particular behavioural characteristics associated with them.

An individual is constrained and expected to behave in a predictable manner. Privacy not only enables a person to relax and unwind in a secure situation but also allo for behaviour which may be unacceptable or even pr hibited in other circumstances. Each of us, in seeking impose our own privacy control on others, is also subje to society's privacy norms in the form of custom, tabo and ritual. Because these form part of the individual socialisation process the privacy element in them is n always obvious. These norms prescribe not only wh acts may be performed in public places, and in wha circumstances, but also those acts which society expect people will not do in public. Many of these 'private act are concerned with sexual, excretory and ablutive fun tions but also are often associated with intimate soci relationships. In fact, Charles Fried in his *Anatomy o Values* (1970) claims that:

> *privacy provides the rational context for a number o our most significant ends, such as love, trust, friend ship, respect, and self-respect.*

In effect he is saying that although privacy concerns th right to withhold from others, not to interact except b choice, perhaps its even more important function is t provide the necessary environment for some of the significant relationships which human beings ca with each other. In other words, in the midst of rivacy have a need for interaction with others. But underlyin all our most valued interpersonal relationships and in ou every-day encounters with others, is the need for con dence in each other. Without the confidence that th identity, which we are seeking to project is accepted a valid by others, we can hardly interact with them. We ar unlikely to disclose ourselves if we suspect that ou control over the impression which others will form of u has been lost or diluted because they have, or even ma have, information about us which is inappropriate to th particular relationship we wish to have with them. In th respect 'Big Brother' and the awesome potential of moder surveillance devices presents a frightening prospect Which would be the greater evil: knowing that one ca never be free from surveillance or never being sure a any moment whether one has privacy or not?

To paraphrase Jacques Ellul, the French sociologis we may well claim:

> *that it is to be a dictatorship of dossiers and da banks rather than of hobnailed boots will not make any less a dictatorship.* The Technological Society *(1964).*

1. See for example Alan Westin's book *Privacy and Freedo* (1967) and Arthur Miller's book *Assault on Privacy* (197 for descriptions of psychological surveillance techniques
2. Privacy: A cultural view, in *Privacy*, ed. Pennock and Chapman (1971).

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HEALTH IN ASIA

Asian Medical Systems: A Comparative Study, edited by Charles Leslie; The University of California Press, Berkeley, Los Angeles, London; 419 pages. ISBN 0 52 [illegible] 2.

MORE AND MORE, it becomes evident throughout the developed and developing world that the viability of political systems and the quality of life are intimately linked to health. The past several years have shown an increased awareness of problems of nutrition, environmental despoliation, misuse of drugs, over-population, generalised stress syndromes and mental illness — all major aspects of life in the twentieth century. Health as an issue undercuts ideologies and cultural variation: ultimately, it concerns the individual, regardless of citizenship.

The concept of health has received scrutiny recently, and may be usefully and accurately taken as 'the ability of the human organism to rally from insult and to grow in the fullest sense.' This, then, involves other areas in addition to the clinical sciences, such as cultural attitudes and ideals of interest to the social and behaviourial sciences. Health therefore involves culture, which is taken as the shared set of beliefs, values, symbols and modes of action implicitly held and overtly acted, learned from birth usually by way of a single language. Accordingly, culture and health are intimately related to longer-range comprehension of the human condition.

The comparative study of medical systems discussed in this volume shows the present interest in medicine, health, and their socio-cultural ties. The book has several major parts, each on an important theme for gaining a comparative and holistic perspective on medicine and human organisation. These include the great traditions of Hindu, Arab and Chinese history; modern, 'cosmopolitan' medicine, with attention also to socialist states; the adaptive capacity of medical systems, of particular importance is how the 'plural' medical system in which different culturally-delineated domains of curing and attitudes to health operate simultaneously; ecological overviews of medical systems, since all occur within some ecosystemic context; and the revival of traditional medical systems such as Chinese acupuncture.

The wide variety of papers include major statements on traditional medicine in various parts of Asia by such authorities as Basham, Bürgel and Porkert. Several that have a particular import are by Leslie on Indian medicine; Obeyesekere, on the relation of millennia-old philosophy to contemporary culture in Sri Lanka; Dunn on traditional and cosmopolitan medical system linkage in Asia; Taylor on the place of indigenous medical practitioners in modern health services; and the late William Caudill on the potential (daily) context of health and illness.

The volume is the result of the fifty-third Burg Wartenstein Symposium sponsored by the Wenner-Gren Foundation for Anthropological Research. The introduction also describes areas of disagreement between the participants, and their implications. There is, for example, a wide reach in the mind between a careful analysis of the Ayurvedic tradition in South Asian healing and the modern Soviet medical system. The sorts of assumptions and structure which bring these apparently disparate subjects together might not be immediately evident to the lay reader or one unfamiliar with the professional material. But the themes that brought the symposium together emerge, and confirm just how pervasive and far-reaching 'health' issues are. The volume deals with ideas of considerable value, is well indexed and organised, and includes commentaries that provide good overall continuity.

W. T. Jones provides a stimulating overview quite reasonably raising the question of why and how it is that world views change; such change affects specific assumptions about illness, death, the desirable life, etc.

Health issues are becoming a sizeable source of concern for administrations around the globe, as indicated in recent statements by international organisations not immediately tied with health, such as the World Bank. Many newly-independent nations are slipping behind in the provision of minimal health requisites. Here we all become involved, in regard to psyche, ecosystems and international economics. Malthus recognised the last long ago; still, despite the present debate we are not yet necessarily committed to a Malthusian débâcle. Health problems can be epidemic, clearly, but they also can become endemic through the growing world population base and the variety of hosts to carry a widening variety of diseases, many of them attitudinal and not a few of them psychosomatic. This involves more than the elimination of a particular species of germ or parasite; it also involves ideas and expectations about life.

Several things notable in the volume include the striking contrasts of medical systems from culture to culture and across traditions; the degree to which psychological factors are implicit in our perceptions of health as an entity; the degree to which some (not all) systems have displaced or eschewed this element in their diagnostic and operational procedures; the effect of the immediate environment and daily setting on the use of a particular medical system; and the absence of a coherent integrating model or paradigm for this plethora of information.

Friedson observes that medicine today has a preeminence that is 'not merely that of prestige but also that of expert authority . . . it has an officially approved monopoly of the right to define health and illness and to treat illness'. Recent scrutiny, often heated, of established definitions, practices and assumptions within the health and related disciplines bear witness to the accuracy of this observation. Comparative study and substantial enthnographic data can greatly help us to reassess our definitions and redirect our goals necessary though difficult. The evidence is mounting that health and culture are intimately conjoined for practitioner and recipient alike, that more than just specific programs are affected, and that more and more is cumulatively at stake for the generations.

K. J. PATAKI-SCHWEIZER*

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Editor's note: The first World Conference on Traditional Asian Medicine is to be held in September 1979, at the Australian National University. The papers will deal mainly with the three major Asian systems: Ayurvedic, Islamic and Chinese.

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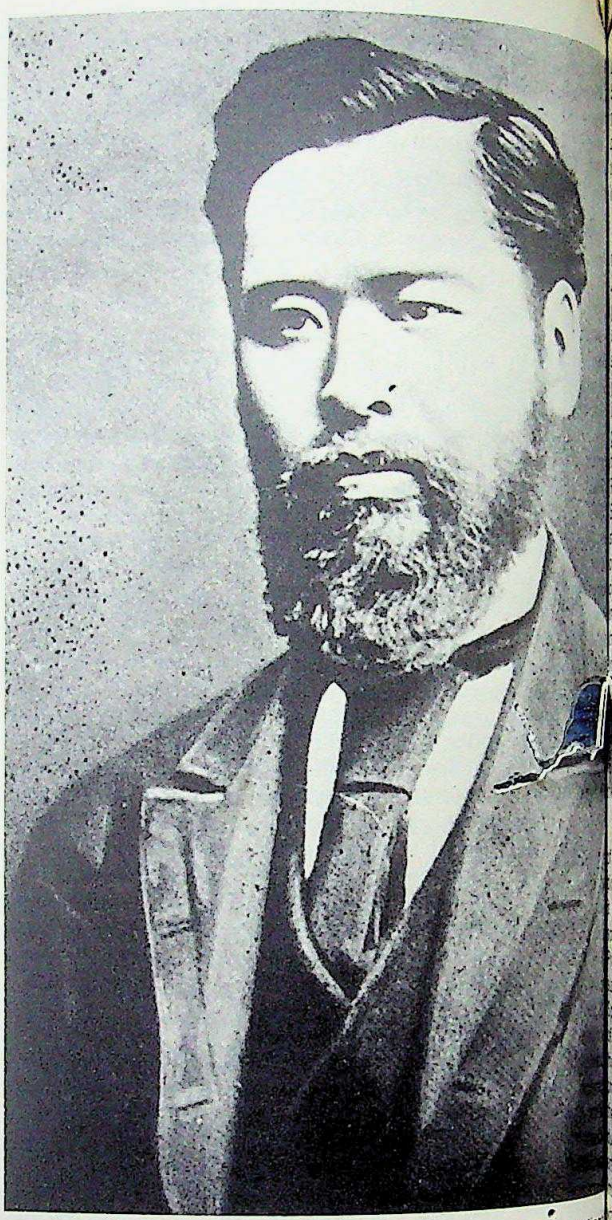

Fukuzawa Yukichi and Mori Arinori, who took prominent parts in the 'Japanese Enlightenment'. (Photos, courtesy Internation Society for Educational Information, Tokyo).

A WIDER WORLD

Stephen S. Large

Meiroku Zasshi: Journal of the Japanese Enlightenment, by William Reynolds Braisted, assisted by Adachi Yasushi and Kikuchi Yuji; University of Tokyo Press, Tokyo, 532 pages. UTP 3021-27119-5149.

WESTERN studies (*yōgaku*) had grown in importance along with Chinese and Japanese studies in Tokugawa Japan despite the national policy of seclusion which continued until the middle of the nineteenth century.

But it was not until after the 'opening' of Japan by the American fleet under Commodore Perry in the ea 1850s, the imposition of 'unequal' treaties by the Weste powers, and the Meiji Restoration of 1868 which overthre the Tokugawa Shogunate that Western studies flourish on a national scale in the 1870s, the period of 'civilisa tion and enlightenment' (*bummei kaika*). The impress drive to acquire knowledge of the West in order to p mote national strength in resisting Western threats Japanese sovereignty and achieving equality with the We

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can be appreciated by studying the Meirokusha (Meiji Six Society) which was formed in 1873 (the sixth year of the new Meiji era) by Mori Arinori. Perhaps more than any other single institution, the Meirokusha, and its journal, the *Meiroku zasshi*, symbolised this new and critical phase in Japan's on-going discovery of the West

The Meirokusha was a small circle of intellectuals whose names are synonymous with *bummei kaika* in early Meiji Japan: Mori, Fukuzawa Yukichi, Nishi Amane, Katō Hiroyuki, Tsuda Mamichi, Kanda Kōhei, Nishimura Shigeki, and others. Most of them had already distinguished themselves as advocates of Western learning in the waning years of the Tokugawa period through their translation of important Western documents while serving in the Shogunate's Institute of Barbarian Letters and most of them had travelled to Europe in various capacities prior to the Restoration. Others in the Meirokusha, such as Sakatani Shiroshi, had been more identified with classical Chinese studies in Japan. But all of them shared a nationalistic commitment to making Japan a strong, wealthy, and civilised nation through the propagation of Western learning. In the Meirokusha. In addition to being men of letters, the majority of Meirokusha members also engaged in political activities outside of the Society either in the service of the Meiji government or in the field of education. As individuals they contributed much to the making of modern Japan. Even after the Meirokusha suspended its journal in 1875 and later the Society itself declined in significance thereafter.

The book under review, a translation with annotations of the *Meiroku zasshi*, gives English language readers direct access to the ideas of the Meirokusha. Accordingly it is a most valuable addition to the growing number of sources dealing with the intellectual history of Meiji Japan. Professor Braisted begins with a long introduction which summarises the history of the Meirokusha and the journal. Special attention is given to the backgrounds and careers of the Society's members and outstanding aspects of their thought, particularly their reactions to the controversial proposal for a popularly elected assembly which stirred the nation in the early 1870s. The footnotes to the introduction are notable for their citation of major books and articles in Japanese and English on the Meirokusha. The introduction is followed by forty-three chapters each of which is a translation of an issue of *Meiroku zasshi*. The footnotes after each chapter provide brief explanations of the importance of selected articles, often with valuable cross-references in the case of articles that are continued from one issue to the next. Both in the text and footnotes, Chinese characters are supplied for the names of key people, institutions, and concepts. This beautifully presented volume is distributed in Australia by the A.N.Z. Book Company.

The central problem which preoccupied the contributors to the *Meiroku zasshi* was, in brief, how to overcome the ignorance of the Japanese people in bringing to the nation the benefits of Western civilisation and enlightenment. This problem was seen to be of epochal significance for Japan; unless it was solved, Japan would remain a backward country forever vulnerable to the Western powers, incapable of achieving the goal of equality with the West which lay behind the government's pursuit of *fukoku kyōhei* (wealth and power). In view of what was thought to be at stake, it is not surprising that the Meirokusha writers assigned to themselves a significant role as harbingers of national enlightenment. Writing in the first issue of the *Meiroku zasshi* that 'the people seem indeed to be incorrigibly ignorant', Nishi Amane claimed, 'it is naturally the responsibility of those in authority in good time to guide the people tenderly by the hand from ignorance to the level of enlightenment, just as one gently removes all the weeds without pulling out the seedlings'.

For several reasons, a sense of urgency pervaded the Meirokusha in striving to enlighten the people. First, although Tsuda Mamichi asserted confidently that 'Western enlightenment . . . will finally encircle the entire world', it was recognised, in the words of Nishi, that 'the elevation [of scholarship] will take generations'. Second, doubts existed that the Meiji Restoration itself had done much to alter the character of the people which was described as tradition-bound, ignorant, and 'servile'. As Fukuzawa put it: 'I do not think that the Restoration, which only slightly altered the front part of the government store, has produced results that have changed the minds of the people one iota'. In other words, it was one thing to change political forms, but quite another to create an enlightened citizenry. Since an enlightened citizenry was perceived to be a fundamental prerequisite for national wealth and power, the Meirokusha writers often expressed their mission of spreading wisdom in crusading terms. Nishi called upon the Society to 'annihilate the obdurate armies of ignorance and . . . trumpet the fanfare of our civilisation'. Only then would practical studies (*jitsugaku*) flourish and only then would men of talent (*jinzai*) emerge in society to serve the nation.

It had been Mori's original intention in founding the Meirokusha that the Society would concentrate on cultural enlightenment. Yet, in fact, the contributors to *Meiroku zasshi* frequently addressed themselves to political problems due to their recognition that cultural enlightenment depended to a significant degree on a political framework which permitted the development of a critical consciousness among the people in relation to both cultural and political life. As Tsuda said: 'I greatly hope that by advocating ideas of liberty and independence to the limit of our strength, we shall implant a spirit of freedom in our people and teach them that they have a right to deny even unreasonableness in government decrees'. The Meirokusha writers were by no means rebels against the Meiji government. But they were critical of what they described as despotic tendencies in governmental policy which they felt might hinder the emergence of an enlightened citizenry freed of its servility to authority and political passivity that had been ingrained in the people during centuries of feudalism. Most of the Meirokusha members were therefore receptive to the idea of a popularly elected assembly as a future, if not immediate, objective so that the 'rule by reason', unifying the high and low in society, would prevail in Japan as in Britain, the most powerful and advanced of Western countries.

If overcoming ignorance was the main problem for the Meirokusha disciples of *bummei kaika,* the general solution they offered was education. For Nishi, education meant the spread of 'systematically organised knowledge' on the basis of rational scientific inquiry which distinguished between the intellectual (*shinri*) and physical (*butsuri*) sciences in the manner of Western thought, contrary to the old Confucian belief that both were subsumed under the general principle of *Ri* (reason). In his view, the positivism of Comte and the utilitarianism of Mill, not the metaphysical and moralistic rationalism of Confucianism, provided the keys to true enlightenment. His dedication to reason in the Western sense of the term is evident in Nishi's essays on inductive and deductive logic in which he literally tried to teach people how to think.

Indeed, the historical development of a secular, rational consciousness in Western civilisation is a major theme in many articles published in *Meiroku zasshi*. Similarly, many

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articles are devoted to translations of Western works ranging from 'The Final Instructions of King Peter of Russia' to the writings of Buckle, Bluntschli, and Joseph P. Thompson. The reader will also find lengthy explanations of basic Western ideas such as 'liberty', 'freedom', and 'rights' that reveal the extent to which the writers sought to provide their countrymen with a fundamental vocabulary of knowledge to apply to life in contemporary Japan. But a second concept of education in the journal was that of moral education to encourage in the people a sense of social and ethical responsibilities that would serve the community and the nation in the quest for equality with the West. Often moral education of this sort was couched in distinctly Confucian terms by such writers as Sakatani. The importance of moral as well as scientific education can also be seen in Nishi's essays on 'The Three Human Treasures' of health, wisdom, and wealth in which he offered a philosophy to relate ethics to politics in an enlightened Japan.

Despite their general agreement on the importance of education, the Meirokusha members debated among themselves at their regular meetings and in the pages of the journal on the priorities and prescriptions for enlightenment in Japan. Several questions proved especially controversial. First, what is the proper role of the government in spreading enlightenment? At issue here was the probelm of church-state relations and whether the government had the right or duty to interfere in the religious life of the people which was so dominated, in the opinion of many Meirokusha thinkers, by ignorant superstitions. Another issue concerning the government's role was the suitability of officials to lead Japan to enlightenment. While many articles lamented the ignorance of the common people, they also condemned the selfishness of officials who pursued narrow private interests ostensibly in the name of enlightenment. To wit, Sakatani wrote to officials: 'Failing to make use of public opinion on the pretext that society has not yet reached the level of enlightenment, they outwardly favour freedom of speech while privately opposing it'. Yet, Sakatani could also be equally caustic in criticising enlightenment scholars who blindly believed everything Western was good: 'Such persons may reach the point of thinking foreign excreta elegant even though it stinks and foreign clothing beautiful even though it is tattered'.

This last criticism leads into a second question that divided the Meirokusha members: how far should Japan go in imitating Western models and was it possible to remould Japan in the Western image without losing Japanese identity? This problem transcended the Meirokusha. Indeed, it dominated the terrain of Japanese intellectual history throughout the Meiji period and thereafter. It surfaces in *Meiroku zasshi* in debates over whether to replace the complicated Japanese language with Western languages (to facilitate access to the content of Western civilisation) or whether to encourage full equality between the sexes in social relations. One also encounters this question in articles dealing with the compatibility of the Emperor system with the democratic institution of a popularly elected assembly.

A third controversy which simmered and flared in the journal concerned the phasing of reforms. Here, the question was whether such reforms as the institution of an assembly should await the progress of the people in acquiring a higher level of enlightenment or whether enlightenment would be advanced by the new step in the political process in which case there would be no reason to delay the creation of an assembly. This issue was raised by the memorial in 1873 of Itagaki Taisuke and others who claimed among other things that an assembly would educate the people by bringing them into the political process.

Finally, the Meirokusha writers struggled with the problem of defining the desirable relationship between private and public interest in the cultural and political life of the new Japan. The most convincing resolution of this problem can be found in Nishi's essays on the 'Three Human Treasures'. Nishi concluded: 'The objective of social intercourse, therefore, is public interest, and public interest is the aggregate of private interests. Moreover, private interest does not go beyond the three principles by which individuals strengthen their bodies, expand their wisdom and accumulate wealth' without interfering in the rights of others.

In establishing the legitimacy of private interest, as pursued, in relation to public interest, Nishi reflected the general concern of the Meirokusha to build a more open society in which the people, armed with civilisation and enlightenment, would become active participants in culture and politics and thereby contribute to the strength of the nation as its most important single resource. By making the pursuit of private interest conditional on the public good, they reinforced the development of a collectivist nationalism that later became the hallmark of the period. Their vision of the unity between an enlightened people and the State and the unity of culture and politics was perhaps their most important legacy to the Meiji era.

In evaluating the significance of this vision of unity between the people and the State and between culture and politics, it is well to refer to Harry Harootunian's observation that these patterns of unity, which provided Meiji Japan with an essential stability in a period of very rapid modernisation, were subsequently broken down in the Taishō period (1912-1926) when the balance between public and private interest was tipped in favor of private interest and when culture became, for many Japanese intellectuals, a substitute for politics, an end in and of itself. Harootunian points out that whereas Meiji Japanese believed in the moral perfectibility of the individual for public ends, the Taishō intellectual stressed the aesthetic (cultural) perfectibility of the individual only for private personal ends; self-fulfilment in the private realm became a substitute for public consciousness and public service. For Taishō intellectuals, what mattered were 'the ethics of being, rather than the morality of doing'.[1] This led them to withdraw from involvement in politics into culture and from public into private priorities with the result that they ceased to relate meaningfully to the political order.

The Meirokusha would not have been pleased with this dénouement. As critics of the present, prophets of the future, and men of practical affairs who were caught up in the promethean transformation of a feudal country into the members of the Meirokusha, in insisted that enlightenment with political progress, private interest intellectual should responsibly engage his with the public interest. That other intellectuals in their wake departed from this model of behaviour was a misfortune for Japan later in her modern history.

Dr Large is a Senior Lecturer in History at the University of Adelaide.

[1] Harry D. Harootunian, "Introduction: A Sense of an Ending and the Problem of Taishō", in *Japan in Crisis: Essays on Taishō Democracy*, edited by Harry Harootunian and Bernard Silberman, Princeton University Press, Princeton, 1974. page

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Anita Desai, author of the book reviewed below by a member of the English Department of the University of Adelaide. (Photograph, courtesy William Heinemann).

VIOLENCE IN SPLENDOUR

Fire on the Mountain, a novel, by Anita Desai; Heinemann, London, 1977. ISBN 434 18631 7.

READERS of Anita Desai's novels *Cry, the Peacock* and *Voices in the City* will be already familiar with her unusual power of depicting the violent, the frightening, the paranoic, and the doomed, among denizens of a contemporary milieu that is seen with a totally unsentimental steadiness of gaze, often unnerving. How different her vision is from that of Ruth Jhabvala's, alike as the two women novelists are in many ways, in their preoccupation with the middle classes and with the genteel *nouveaux riches* of India. For Anita Desai's interest is almost always in the extreme situation, the character fatally skewed by some irremediable psychological disaster, or she will identify the derelict psychotic victims with the flawed society that created them, like that of modern 'mad' Calcutta, the 'City' of Voices in the City' which provides a savage backcloth for the acting out of the tragic destiny of her characters.

Fire on the Mountain, like her previous novels, deploys a handful of characters against a vividly evoked natural background. There is the great-grandmother Nanda Kaul, solitary, near death, her grotesquely comic and pitiful friend Ila Das with the screeching voice, holding on to the last crumbling cliff of gentility, and finally there is the mysterious Raka, Nanda's great-grandchild, who precipitates an awakening in the soul of Nanda that leads to a cruelly violent repellent climax: rape, murder, and a deliberately started forest-fire in the hill station. Anita Desai's interest, and skill in the depiction of neurotic states are well illustrated in these three strange characters. The two old women who have survived, battered and finally desolate, from an illusion of a happy past into a present of equally illusory hopes and dreams, arouse our pity. Nanda Kaul has found herself, against her own will, under Raka's influence, creating a farrago of glamorous lies centred on her beloved father and idealised husband in an attempt to forge a link with the elusive child who also inhabits, like the old woman, a world of solitary but vivid dreaming without grief or regret.

Desai's most brilliant prose is lavished on the Himalayan hill-station, its flowers, screaming monkeys, jackals, mad dogs and hoopoes, all ablaze like a post-Impressionist's palette. The hallucinations and dreams of the characters seem natural in this setting of natural but cruel splendour and faded colonial opulence. More vivid than the story (which after all only moves dramatically in the last few chapters after the smouldering menace of a slow run-up) are the pictures flashed on the screen of the novel's texture: Raka's 'white-knickered bottom showing above a pair of desperately clinging heels' as she scrambles up a hill; the swooping band of *langurs* like 'pierrots in black and white, clowns and bandits at once—bawdy, raucous and marauding . . .'; ugly old Ila Das choked to death, then sickeningly raped lying on the goat droppings, until her eyes become 'two alarmed marbles of black and white'.

The child Raka, whose animal-like wildness is vividly contrasted with old Nanda's finely-probed terror of moving out of her solitary caged retreat from an unhappy family life, is one with the cruel beauty of Indian nature symbolised by the hoopoe, the snake, the bloodied sun, and the forest-fire. Wild Raka, savage Nature, and the cruelty of man, conspire to kill the absurd, pathetic Ila Das and so to break Nanda's last links with peace and sanity.

Essentially a vivid miniaturist whose forte is surely the novella or short story rather than the full-length novel, Desai is able to suggest the (literally) Himalayan scale of her Indian scene by a few bold powerful colours used in many clever combinations. She produces economically a deeply disturbing and haunting impression. But this book about India does not make for comfortable bedside reading and should be shunned by the sentimentalists.

—HAYDN WILLIAMS

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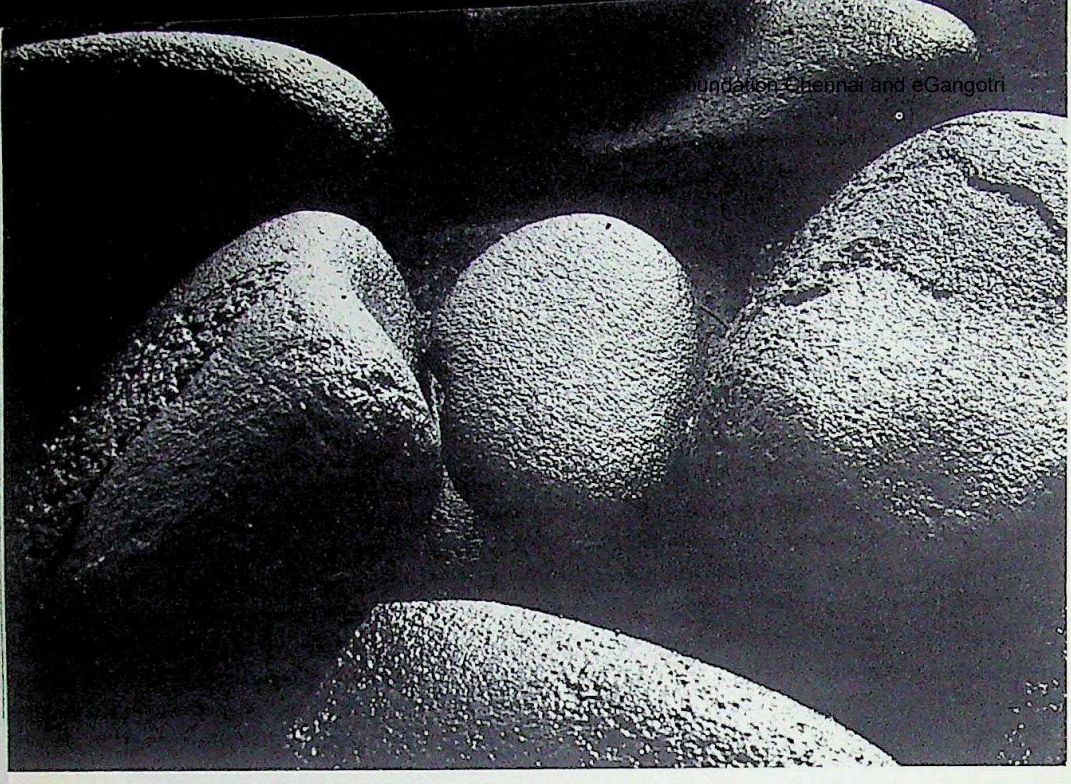
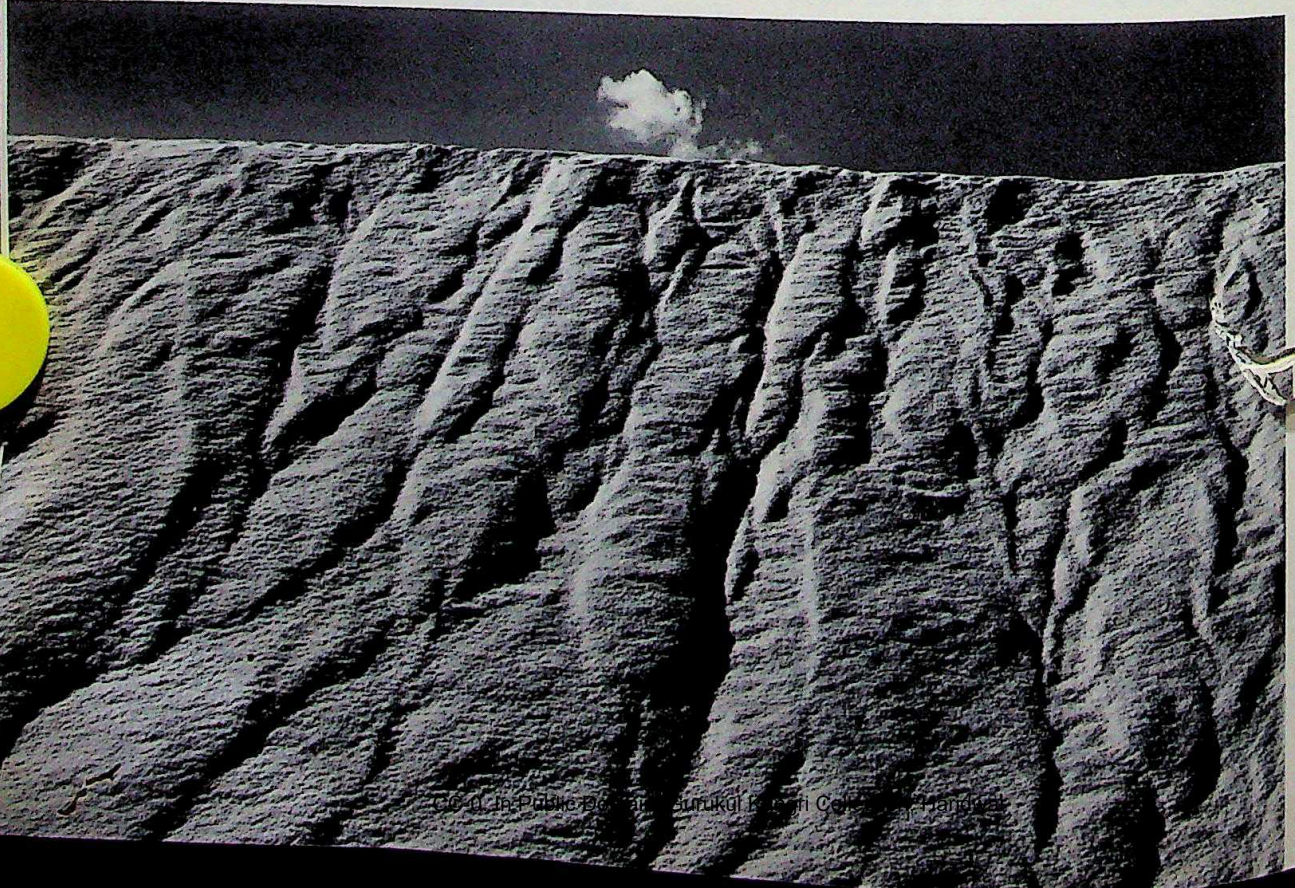


FORM AN

No one with any common sense would ever argue with an ardent photographer about the merits of colour or black and white. And, in fact, there's no reason to, as this small folio of shots by Laurie Wilson, F.R.P.S., of North Geelong, Victoria, amply proves.

He has managed to get on to paper through his lens the feel of a wave in its final lapping against the sand, the glint of light on water illuminating the small but vibrant surfaces around it, the texture of stone, rounded and worn by time and the sea, the leather-like surface of a hill bearing marks of rivulets with a wisp of cloud to lighten the effect, and a stretch of sand, almost perfectly flat except for the tiny marks left by the waters swirling gently around the smoothed stones—a picture reminiscent of this month's cover.



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VALUES IN BARK

Joseph Reser

The Arafura Swamp region of Central Arnhem Land, in Australia's Northern Territory, is remote, wild, beautiful, untouched. It has been compared in extent and nature with the Everglades, in America's Florida. 'The Aboriginal people of the Arafura Swamp are 'some of the most "together" people I have ever had the pleasure of knowing', according to the author of the following article. He spent eighteen months in the Arafura region with his wife, Sheila, and two children, then a boy of ten and a girl of six. As an environmental psychologist and Research Fellow with the Australian Institute of Aboriginal Studies, Dr. Reser spent most of his time in the field, examining the Ganalbingu people's system of values and attitudes towards the larger environment—their relation to the land, their views on man-made as against natural things, and the symbolic importance of their dwellings. He had ground work to do, for published work on the ethnography and language of the Ganalbingu was lacking. Dr. Reser has just accepted an appointment at the James Cook University in Northern Queensland.— Editor.

IT IS a common belief that Australian Aborigines had very little in the way of a vernacular architecture. This belief is consistent with the notion of a rudimentary technology and virtually nothing in the way of material possessions.

Theirs is a simple way of life. At night they settle down wherever their wanderings have brought them. They may stay there for a few days, laughing and gossiping, hunting and gathering, until the food resources are exhausted . . . The earth is their bed, and they sleep in the open without shelter.[1]

Such perceptions are perhaps far more revealing about cultural filters than they are accurate about indigenous culture and dwellings. There are many definitions of a 'house', and few correspond to the conventional European option. In Aboriginal Australia, as in the rest of the world, the built environment largely reflected people's needs, life style, and economic system, rather than technological feelings or shortcomings. Dwellings were rooted in a cultural as well as a physical environmental context — a context of values as much as technologies.

Houses are, inevitably, institutions as well as places where people live. As such they embody values and functions, are important agents of socialisation, and constitute the settings in which behaviour takes place. Such social definitions and behavioural expectations are implicit in walls and rooms and furnishings, and in the general orderings of space. Varnished pews, incense, and ethnic ceilings demand an attitude of reverence in a European context; a chair introduced into a traditional Aboriginal social setting 'raises' the plane of conversation and interaction to a metre off the ground. Different settings, different 'house rules' apply. A home's structured environment is a *literal* vernacular, expressive, rich with information, and automatically 'read' and legible to those who use it.

There is also, of course, an important psychological dimension to where one lives, where one eats, sleeps, interacts with important others — and from where one copes with the rest of the world. A house is not a home unless we so define it—when so defined it is a condensation of values and an emotional investment, in addition to being an architectural entity. The psychological implications of one's dwelling environment in terms of familiarity and control, security, identity, and social support are extensive. Dwellings are, in brief, central features of the environments in which we live, and this is as true for Aborigines as for mainstream Australians—despite current stereotypes. Shelter and security are fundamental—however defined—and are inter-related.

Dwellings are also, in many ways, a statement about man's relationship to his larger world. Whether dwellings are sited in congruence with, or in spite of, environmental contexts, for example, is noteworthy and informative. To the extent that the environmental context (whether physical or social) is ignored, both environment and householder pay the cost. Our built environment both determines and reflects our perceptions of the natural environment[2] and, just as people and dwellings are products of a mutual definition, so too with the larger environment. Aboriginal dwellings have much to say about attitudes towards the land and the nature of human technology. European environments and values have been characterised by a 'control over nature' relationship.

Some obvious features of European dwellings include a segregation of 'outside' from 'inside', which simultaneously insulates and isolates occupants. Indigenous dwellings seem to reflect and incorporate more of an interdependence with the openness to the larger physical and social environment; perhaps a more basic life style is the bonding agent. It is certainly true that such ecologically sensitive and user-built architectural forms are perhaps our best example of 'less is more' in terms of built-in options and general liveability. It is worth considering that a traditional built environment is the product of many generations of a collective and cultural coming-to-terms with the environment. Planners today would do well to examine the nature of an 'evolved'

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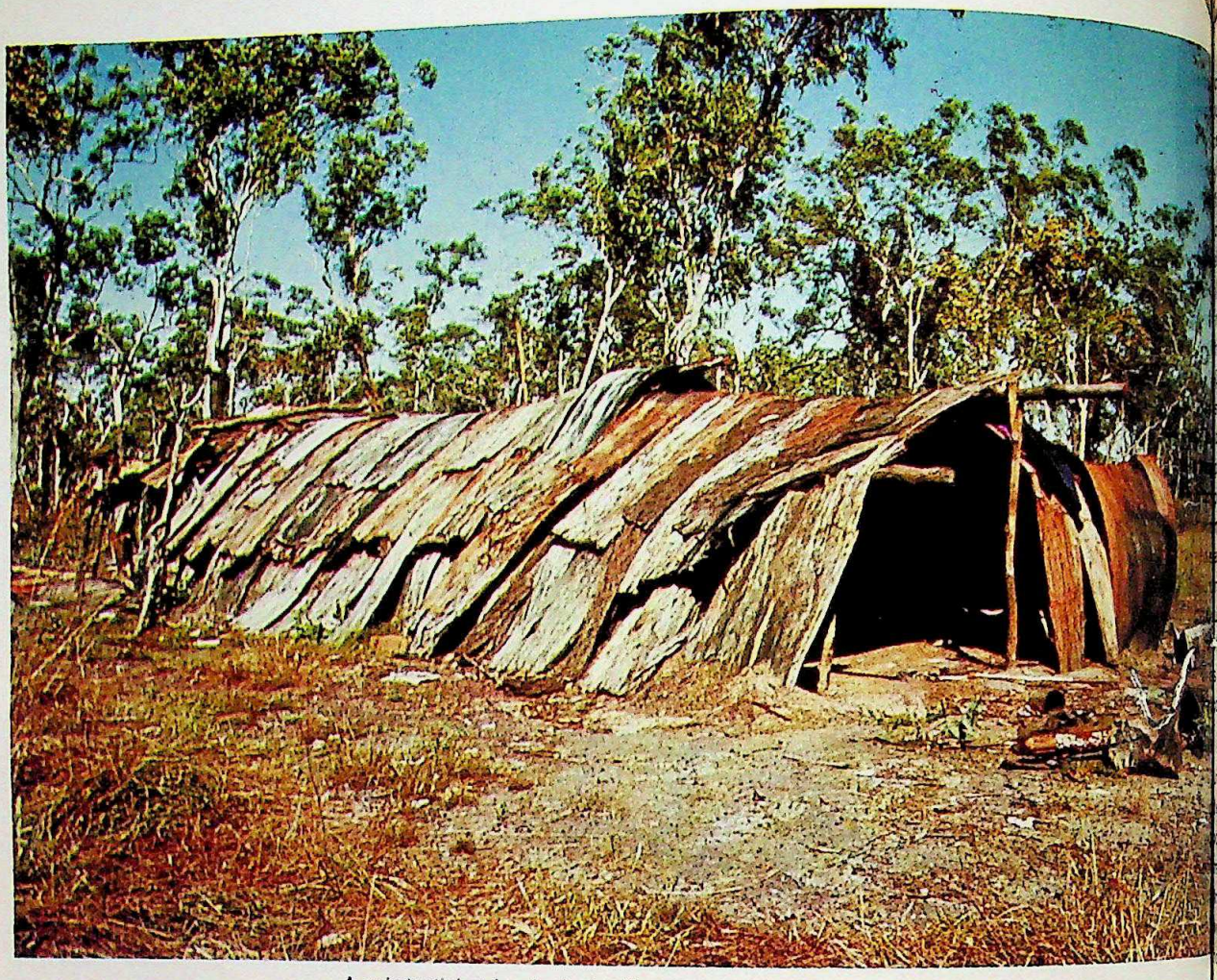

A substantial stringybark dwelling at Mulyungunuk outstation.

correspondence between behaviour and setting, where form fits people's needs. Australian Aboriginal dwellings provide a compelling and contemporary example of such adaptive design — they achieve a remarkable synthesis of function and form.

The Australian continent, before European occupation, was culturally diverse — in language, institutions, and physical environmental adaptations. Traditional dwellings reflected both this diversity and some common environmental denominators. Early observational and ethnographic records include reports of substantial log and sod dwellings, clay and mud exteriors, houses with stone walls, rock and cave shelters, and a great variety of often-substantial bark and brush dwellings.[3]

Dwelling types and general living circumstances changed appreciably from region to region and often from season to season. In the tropical north, for example, there is a marked environmental and climatic change brought about by the monsoonal transition from wet season to dry season. In central desert areas there are often daily extremes of temperature to which people and dwellings must accommodate, and conservation of heat can be as important as shelter from the sun.

In Central and Eastern Arnhem Land, as in most of coastal Australia, the ecological diversity and richn of the country allowed for a more sedentary existe within a relatively circumscribed area of country. Th would probably have been no more than two or th principal residential moves in the course of a year. S moves were largely a reflection of changing circu stances with regard to water and the availability of fo locally, though ceremonial life, conflict, the condition the camp, and simple preference were relevant facto Types of dwellings in this region were determined b variety of basic factors, the principal being real need a availability of suitable materials.

In the dry season, from May to November, there typically little need of an extensive structure. in fact, decided advantages in a minimal one. There is rain, and mosquitoes are far less of a problem than the wet. The cold at night can be severe, and it is be met by carefully banked fires and windbreaks than more enclosing environments. This is particularly t when the sun comes up, and one wants to benefit fr the warming rays. The other critical need in the Dry protection from the sun during the day, and this is a provided for by a brush shade which allows for maxim benefit from breezes and does not constrain activities

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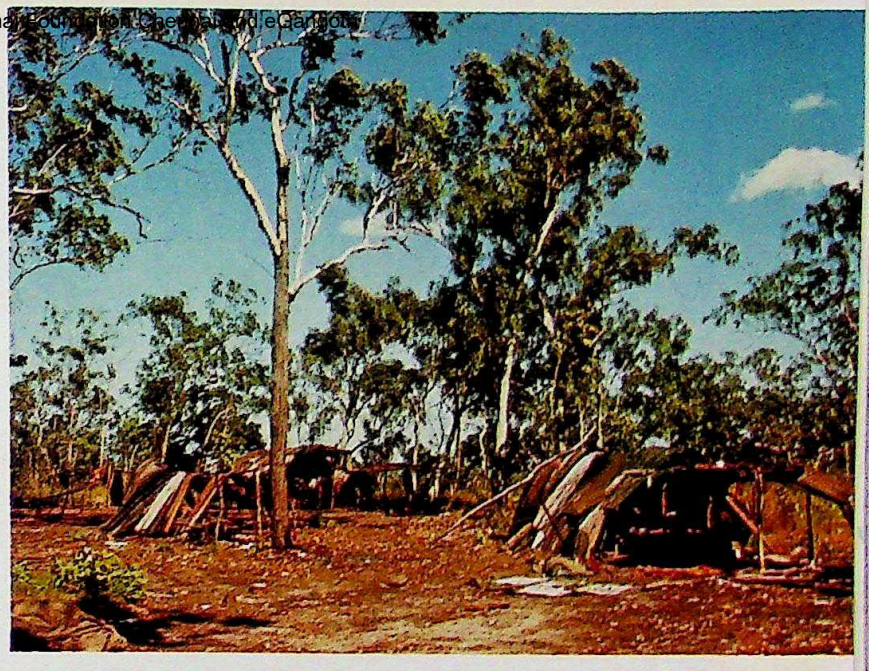
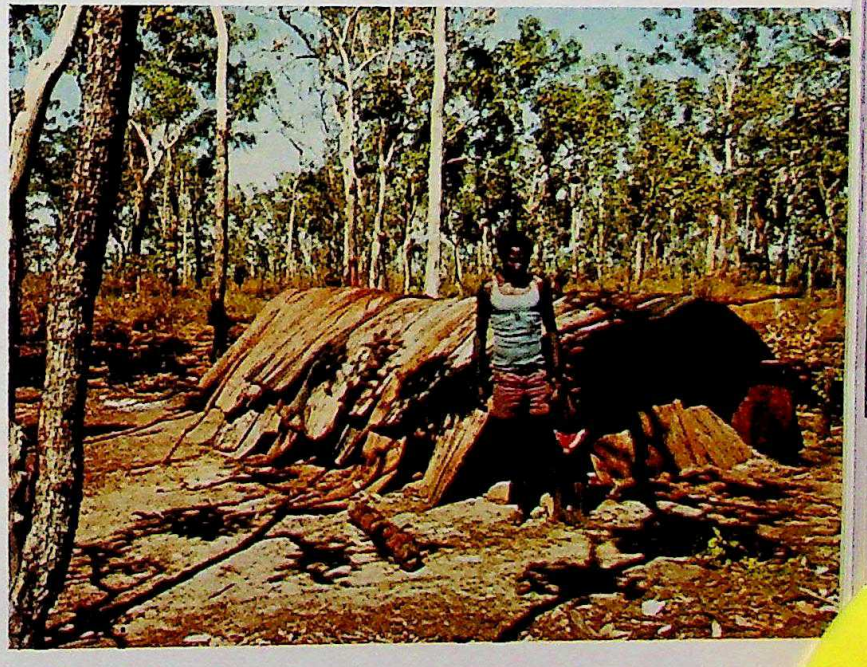
With the onset of light rains in late November, needs change. Late dry season camps are often situated in low-lying swamp areas, or close to receding billabongs and watercourses. At this time of the year such areas yield a rich variety of bush foods, particularly fish, turtles, big snakes, geese, and many vegetable foods. The type of dwelling in such locations is determined by the available material and the extent of rainfall. Paper-bark forests (*Melaleuca leucadedron*) are extensive in most low-lying regions, and the bark is made to order for protection from rain. At the start of the wet season, stringybark (*Eucalyptus tetradonta*) cannot be obtained, because the sap has not yet started to run. Such trees are also at some distance from camps nearer the swamps. With the approaching wet season and heavier rainfalls, the mosquito population becomes formidable and very radically determines living arrangements. Shades roofed with paperbark are quickly converted to more enclosed structures which trap smoke and seal out mosquitoes. Often new structures are built, with a light sapling framework and dome shape to maximise closure and space. Again, paper-bark is the most serviceable material available and readily conforms to contour and need.

Perhaps the most striking type of house built in the Arnhem Land region is the stringybark wet season dwelling. Such structures are built when torrential downpours begin, and when the bark can be stripped from trees. Camps have by this time moved to higher well-drained locations, where there is considerable savannah woodland and a plentiful supply of bark. These bark houses are strong, simple, and functional. The structure and size of the dwelling vary, but usually there is a basic framework of forked upright posts and crosspoles, over which sheets of raw bark are alternately laid to facilitate run off. Such a dwelling typically includes a raised platform floor or loft, and often both. These structures can withstand violent rains, cope with wind, fire and mosquito control, and keep people and possessions high and dry. They fit people's needs admirably, and are, in any objective sense, a model of functional design. It is probably not without reason that the forked posts and bark sheets of the *gatjawordo* (stringybark platform house) have become the symbolic equivalent of human occupancy, and are embodied in myth, ritual, and art in the Arnhem Land region.

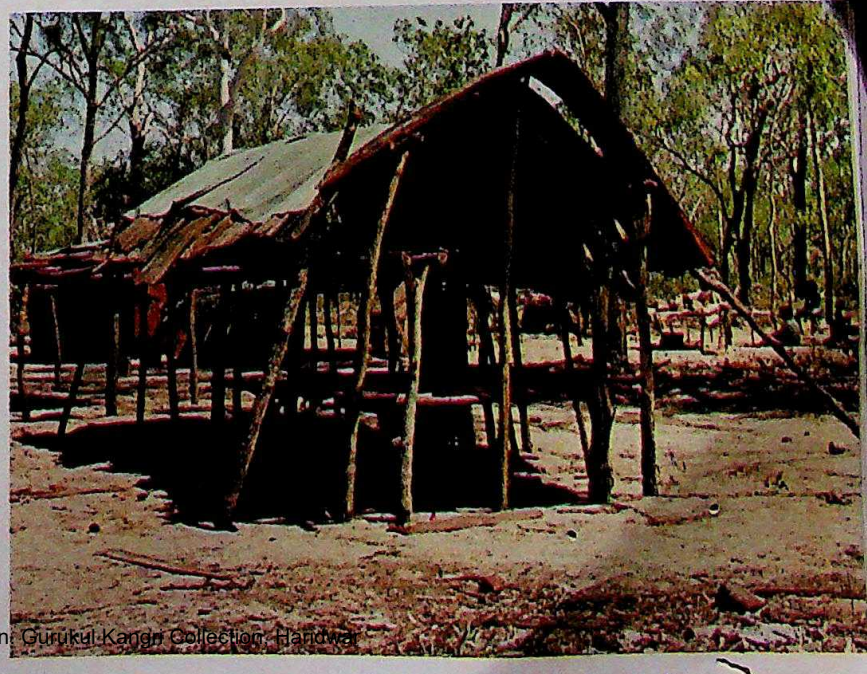
It is doubtful whether there are many cultures in which dwelling does not reflect a considerable symbolic investment. It is the locus of most important human activities and is a dramatic and cumulative statement of social and technological achievements. Remarkably little attention has been paid to the recurrent use of the dwelling as a symbolic vehicle in Aboriginal cultural contexts. The forked post, crosspoles, and bark sheets are regarded as *ranga* or sacred, totemic objects by a number of clan groups in the Arnhem Land region. The importance of the dwelling is often related to the mythology of the Wawilak sisters, who built the first dwelling.



A wet season camp at Mulyungunuk, abandoned during the Dry.



A station hand and his daughter return to their traditional life style (photo by George Chaloupka); below: a large stringybark home on piles in the Arafura swamp region.



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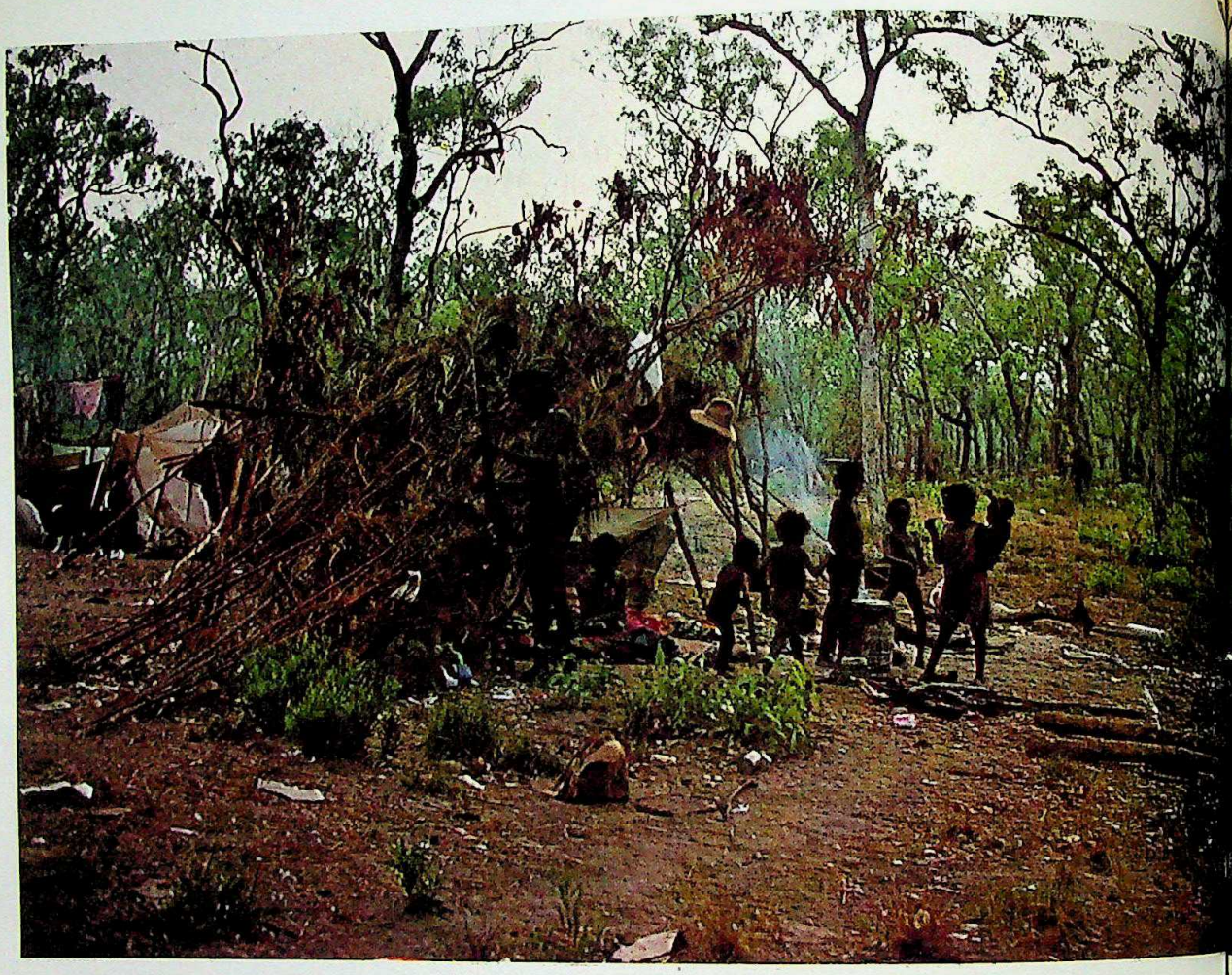

Above: Morning preparations for the day's hunt; below: the noted artist, Bulun Bulun, with a finished painting against the w of a dry season dwelling.

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An early evening fire, to make tea and keep mosquitoes away.

The symbolic use of the dwelling components recurs in ...l, songs, and paintings. The forked post, for example, ...ously, represents the female principle, the uterus of ...Wawilak, the tongue of the rainbow serpent, and the ...on of the female and male principles. Dwellings are ...uent themes in paintings, and dwelling components ...commonly used as background motifs by those clans ...o regard them as sacred. Songs cover dwelling con...uction, siting, collection of bark, and so forth. There ...also frequent use of sacred shades and shelters in a ...l and ceremonial context. The inherent meaningful...of traditional Aboriginal dwellings has been virtually ...fied. For ...Aboriginal or a European, there is per... no more powerful symbol of human occupancy and ...relationship to his world than the forked post ...nts of a bark dwelling, happened across when ...g through the bush.

...s worth while examining the material components ...ditional dwellings in order to disabuse a few people's ...ices. These materials are in themselves a state... of self-sufficiency and appropriateness. The stringy... used in the construction of dwellings has been called ...ern Land's most valued and versatile commodity. ...strong, weatherproof, and easily worked, and can be used for everything from coffins to canoes'.[1] Paper-bark is also invaluable as a resource, and is widely used for ground cloths, blankets, food wrapping, water containers, rafts, cigarette paper, and, of course, as a lightweight and versatile dwelling component.

There is no question that bark is a natural building material with some decided advantages over plywood or canvas. These relate to availability, cost, time, workability, and multi-purpose utility. Virtually no tools are needed to work bark, other than fire and water, nor are tools required for construction. There is little investment in time or money (a house or canoe can be built in four to five hours), no mortgage to place, and no need to arrange employment. No prototype dwellings (European-designed and constructed 'minimal' houses for Aborigines) that have been introduced into the Arnhem Land region have any advantage over a traditional house. The only possible —and less tangible—advantage is a political one; that is, people can see that something is being done in their community, and any type of European housing has high political visibility to evaluation teams and constituents.

The traditional Aboriginal dwelling in Australia is hardly unique, as popular stereotypes would suggest. More than half the world's population today lives *around*,

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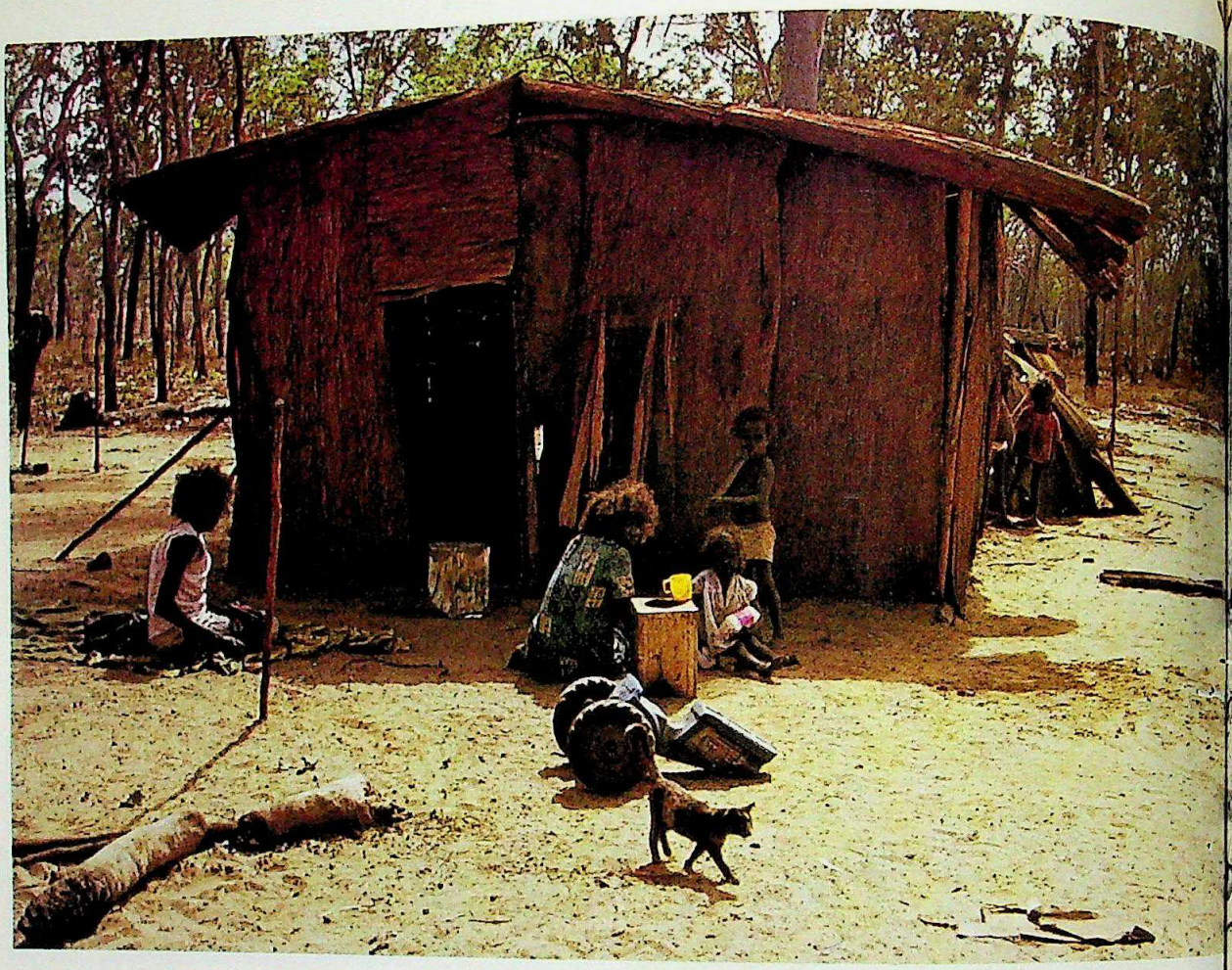

An adaptation of a Western house style, using traditional bark for walls and roof.

not *in*, dwellings and only a small proportion of the world's inhabitants live in anything equivalent to a conventional European house. Subsistence life styles engender a far more basic architectural and behavioural relationship with the larger environment than do more industrial modes.

Bark, for example, has been widely used for building, wherever it has been available and suitable. It was widely used by North American Indian groups[5] and by early American settlers, much as was the case in Australia. Circular or semi-circular brush shades and dwellings were utilised throughout North America and Africa, many being identical in construction and form to the Aboriginal brush *wiltja*, or paperbark mosquito house.[6] There is a direct parallel between the wet season platform house of Arnhem Land and the Seminole Indian *chickee* of the south-eastern United States, and a similar dwelling design is found throughout south-eastern Asia.[7] There would appear to be a considerable convergent evolution of a number of house types in terms of the inherent responsiveness and versatility of design and components. There has been, however, considerable cultural relativity with respect to the larger social context of the dwelling and invested meaning and norms.

Traditional dwellings not only still exist in the Arnh Land region, but are often much preferred in a clim of opinion where being called a '*balanada*', a Europea reflects social censure. Many conventional Europ houses in larger settlements stand empty, both becau of an apparently genuinely motivated decentralisa movement and because of the inherent incompatib between traditional values and 'other-culture' b environments. Corrugated iron has left its indelible m on most outstation communities, and the use of can and plastic sheets is widespread. By any measure practicality and utility such materials often well s people's needs, are within their econo[illegible] grasp, and not preclude a more traditional structuri[illegible] of space environment. In a number of Arnhem Land comm virtually all of the dwellings are constructed of b timber and bark.

Only recently has there been serious interest in peop attitudes toward the larger environment. This came w the realisation that it is more our perceptions and va

* *The word is a version of the Indonesian belanda, a ruption of* Nederlander, *which would have been borrowe the Aborigines from the trepang traders from Macassar.—Ed*

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Bulun Bulun collecting bark from a wet season dwelling to recycle it for a painting.

our technologies that ultimately result in environmental cost and deterioration. When we build houses, we create environments—psychological as well as physical—environments that reflect our values and attitudes toward the larger, natural environment. Dwellings are of particular interest, not only because of their psychological importance and determining nature, but because, for most cultures, they constitute the principal and most dramatic way in which man structures his environment; the dwelling is the interface where man's technology directly interacts between the natural environment and his own comfort, security, and well-being — it is the interface where values are 'concretized'.

There are few subsistence cultures, for example, where people think in terms of 'environmental resources', a way of thinking we take for granted. This reflects a considerable distancing from the environment, and brings about an ultimately one-sided and exploitative relationship. Traditional philosophy is worthy of particular note in its literal and literal identification with the natural environment. An adequate understanding of man's relationship to his natural environment, and those which he creates, is largely premised on an understanding of environmental perceptions and values. The matter is of fundamental importance.

The majority of Aboriginal groups in the Northern Territory, and in parts of Western Australia and northern Queensland, are still very much a people in transition. Many values, attitudes, and aspects of everyday life are radically different from the conventional European. Aboriginal attitudes and values toward their environment are of particular interest, not only because of the recent saliency of land rights, and a possibly unique attachment to and conception of country, but because of an eminently successful relationship with (to the European mind) a harsh and uncompromising environment. Such perceptions and technological adaptations enabled indigenous Australians to come to terms with their environment for possibly sixty thousand years — without endangering it, or radically altering it. There is an implicit 'design with

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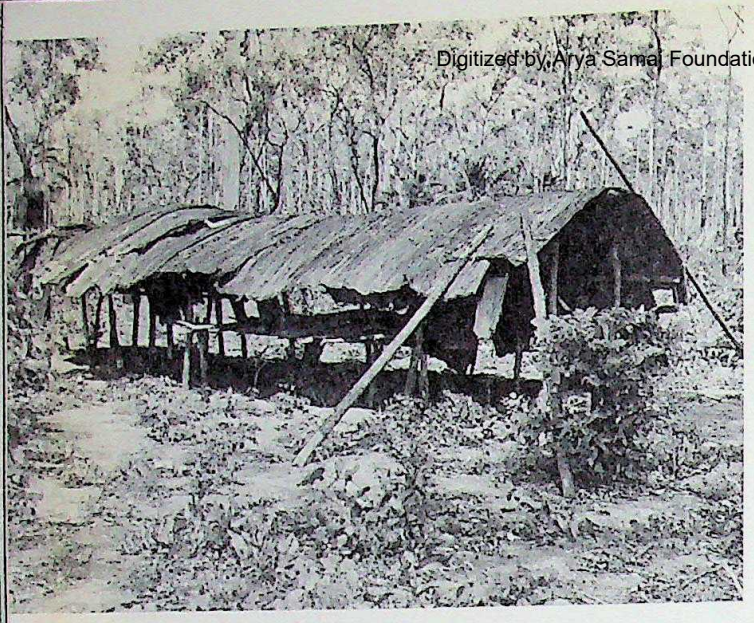
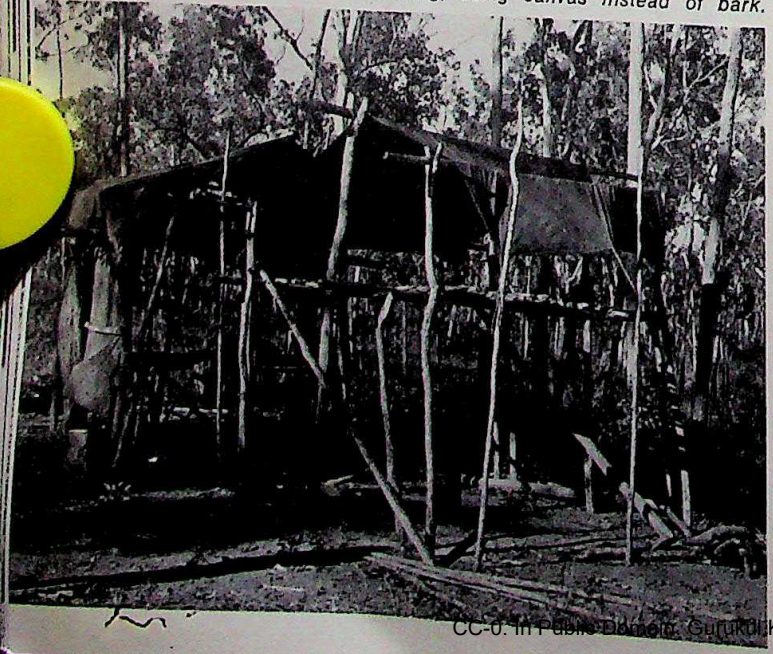


Wet season dwellings, raised from the ground and thickly roofed with stringybark.

Another wet season dwelling, using canvas instead of bark.



nature' philosophy in an Aboriginal bark and bush tim... 'house', and perhaps considerable wisdom.

It might be mentioned here that in a recent vol... on a UNESCO conference on *Man and Landscape* ... *Australia* the 'Australian vernacular architecture' discus... is European. Yet the introduction to the volume says ... 'No matter how earnestly they are implored to do ... Australians are not likely to learn the ways of ... Aboriginal inhabitants'.[8]

The mythology of Aboriginal groups along the north... coast of eastern Arnhem Land includes the follow... interesting story. A Macassan, by the noteworthy na... of Noa, came by sea to the Arnhem Land coast in ... distant past. Noa's boat was loaded with all of ... material goods of his culture, including tobacco, a... rice, and, significantly, Macassan dwellings. Noa l... the country he saw, pulled his boat upon the beach, a... started unloading the fruits of his technology. Some ... honey bees, who were Aboriginal ancestral spirits, noti... Noa unloading his boat, and they asked why he ha... come to their country. Noa responded that he thought ... was a good country and that he would like to settle in... He then showed the ancestral spirits what he had brou... with him, and told them that they could share these thi... in return for their country. The honey bees expres... little interest in the various goods, and successiv... turned them down; they said they had their own ... axes, their own bush foods, and their own quite com... able dwellings. Noa was insistent, and continued unl... ing his goods and setting up his camp. He refused ... listen to the bees' entreaties that he should leave. ... bees then stung Noa repeatedly, so that he gathered ... his goods, got into his boat, and pushed out to ... Noa's boat sank some distance from shore; it can ... be seen today, in the form of a rock.

(Photographs, except where otherwise acknowledged, are ... the author and by courtesy of the Australian Institute ... Aboriginal Studies).

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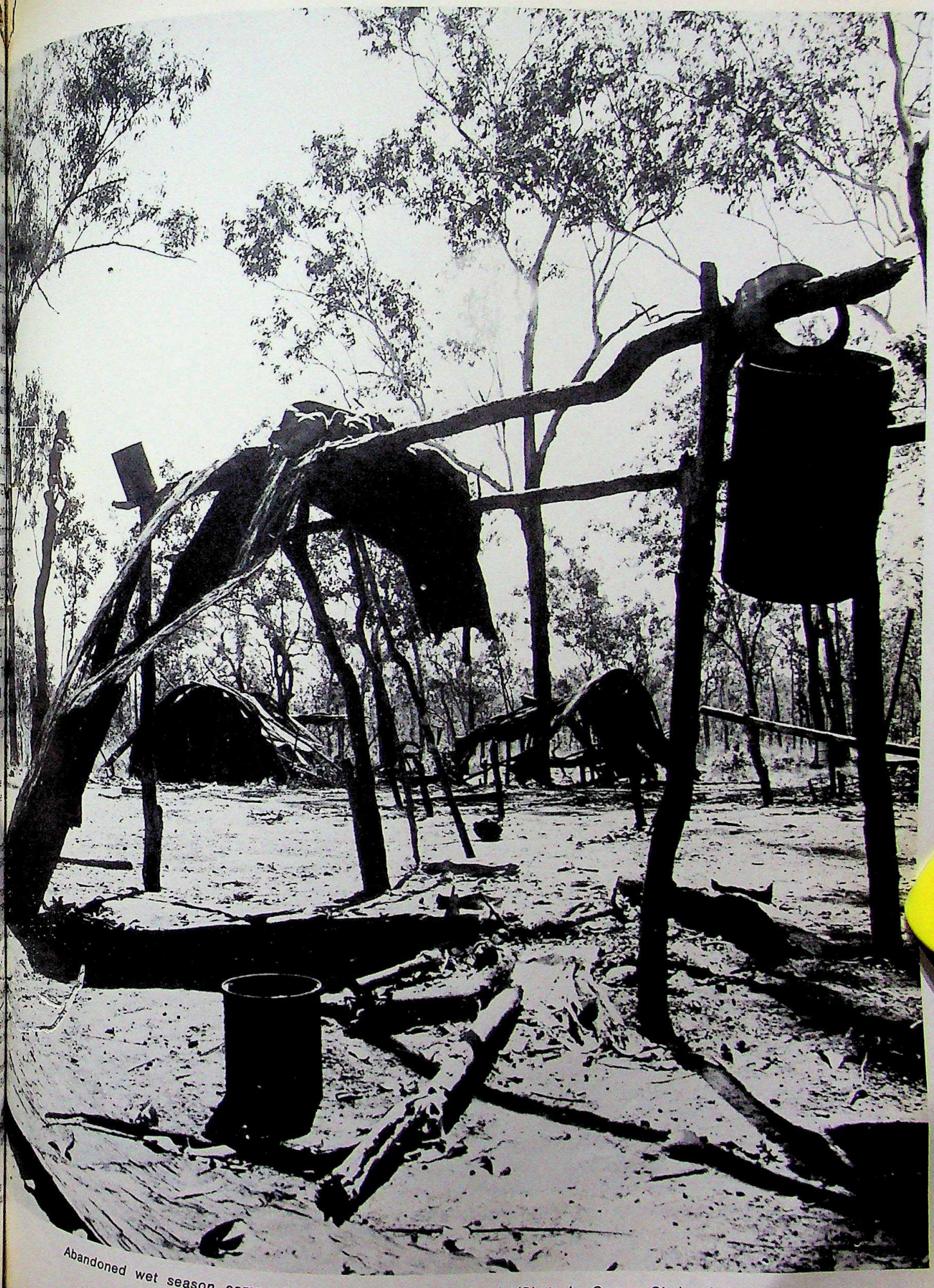

Abandoned wet season camp at *Mulyungunuk, Arnhem Land.* (Photo by George Chaloupka).

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A fifty-year-old concrete image of the demon Mahishasura, after whom the city has been named. (All colour photographs, P Features, Jaipur, India).

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MYSORE CITY—A PROFILE

R. K. Srinivasan

MYSORE CITY is the headquarters of the southern- district of Karnātaka State. Its area is a hundred ve kilometres and population about four hundred usand, which makes it a fairly large town but a small y. It sprawls against the backdrop of the rocky mundi Hill which is a ridge of crags, caves and scrub- gle about nine and a half kilometres long and three ndred metres high on the south-eastern fringe of the y which is itself situated at a height of two thousand e hundred feet above sea-level. It is a well-planned city h fine roads, parks and buildings, rolling downs, ver- t lawns and noble trees. It seems an irony that a city well endowed by man and nature should be named r a buffalo-headed demon, *Mahishāsura* (Mahishūr- sore) whose tyranny ended, according to ancient nds, when the goddess Chāmundi, Protectress of the ous and Destroyer of the Vicious, slew him in a e-day battle. Another theory is that Mysore is identical h Mahishmati, to which the Mauryan Emperor Asoka rd century B.C.) sent a missionary to preach the teach- of the Buddha.

The city is unique in its traditions, its institutions, its mosphere and its way of life. Those who have lived e for some years become Mysore addicts, and Mysor- s whose careers lie in the larger world always long and often do, return to it. Mysore has something to everyone. It has shopping centres to delight the rd souvenir hunter. It has restaurants, good pic- houses, music circles and other cultural organisations well as a variety of palaces, museums and art galleries. e Mysore university campus is an academician's dream me true. The ancient Saraswati Bhandar and Oriental Research Institute are repositories of rare books and manuscripts and other material valued by scholars. There are horse-racing and golf, cricket, football and tennis and other sports, and there are many houses of traditional wrestling or *Kusthi,* an art which was muct fancied and patronised by the Mysore rulers. For one who seeks only quiet and silent contemplation, Mysore offers delightful walks, a bracing climate most of the year, sapphire skies in summer, unbelievably beautiful sunsets and the most fantastic cloud formations during the monsoon season.

For centuries the Palace was a potent influence on the city's life and development. It was the capital of the last four generations of the Wadiyar's dynasty which ruled over Mysore State for over five centuries. The first Wadiyar became the Raja of Mysore in 1399 A.D. And the last Wadiyar, who was a Maharaja, stepped down from the jewelled throne in 1950 accepting the comparatively colourless role of a constitutional governor in free India. The dynasty of the Wadiyars lingers on in Mysore in the person of Srikanta Datta Narasimharaja Wadiyar, son of the last Maharaja Jaya Chamaraja Wadiyar.

The palace gave the citizens of Mysore certain graces of life still noticeable among members of the older generation; a certain gentleness of disposition, an un- failing courtesy, a readiness to offer hospitality, a taste for art, music and good food, and above all a deeply religious outlook. Even the humblest Mysorean of the generation that knew the palace in all its glory will sport a gold-laced turban which was an essential item of the prescribed dress for admission into the royal presence. Coloured montage prints of three generations of Maharajas framed in gilt are a common feature in older

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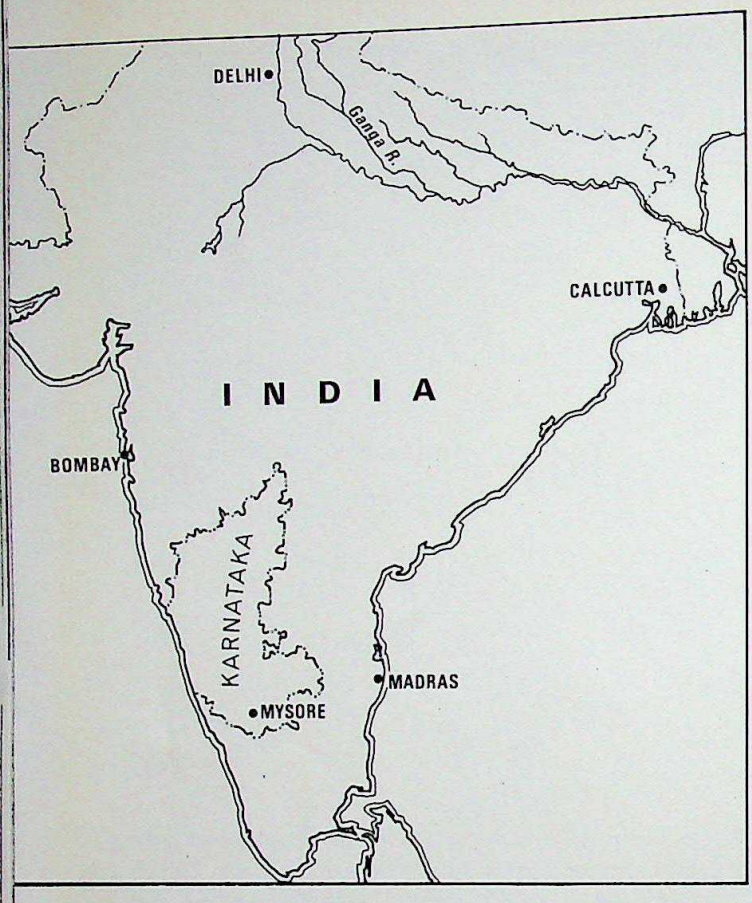
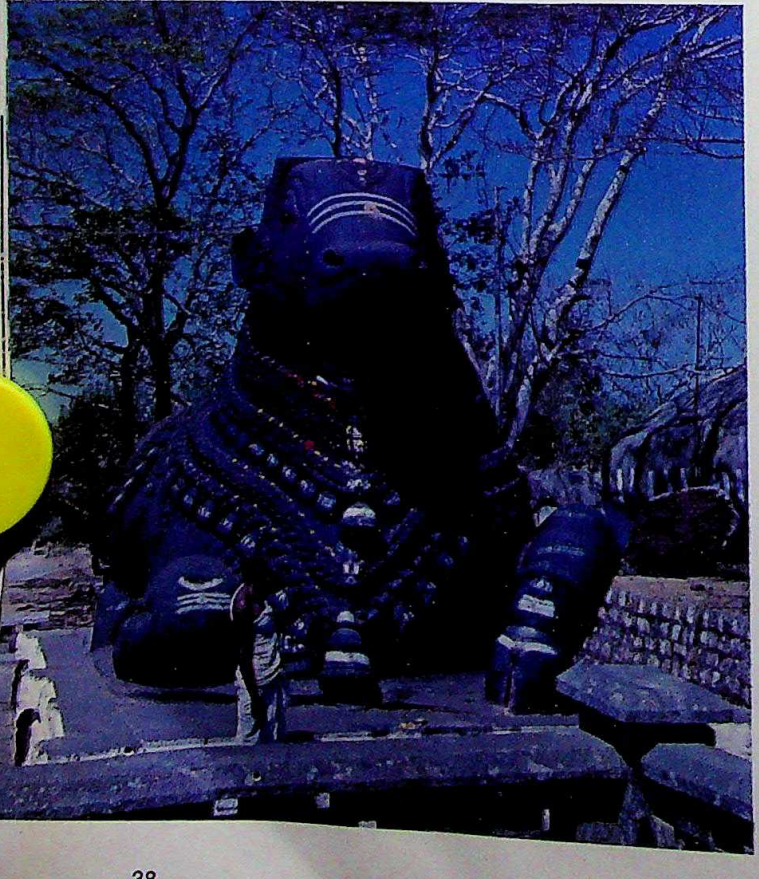


'An impressive monolith of Nandi *the bull, vehicle of Lord Siva . . . over two thousand five hundred tons of granite'.*



homes, while the aroma of smouldering incense st creates an atmosphere of sanctity.

The Chāmundi Hill dominates the city on the so east. For all practical purposes it has always been a p of Mysore City. On top of the hill stand the anc temple of Chāmundi, about five hundred years old, the more ancient temple of Mahābaléshwar, about se hundred years old. There is also a fifty-year-old conc image of the demon *Mahishasura* after whom the city been named. At the highest point on the hill is situ the elegant Rajendar Vilas Palace, once the Mahara summer residence and now a luxury hotel. There is impressive monolith of *Nandi* the bull, vehicle of L Siva, at about the seven hundredth step to the tem It is one of the largest and most artistically execu sculptures of its kind, and contains over two thous five hundred tons of granite. The carving of monolith and the building of the thousand steps sca the hill are attributed to Dodda Devaraja Wadiyar ascended the throne in 1659. In spite of an excel five-mile motor road to the top, the devout prefer somewhat exhausting climb up the thousand roughly steps to the temple.

The temple on the hill has always been held in spec reverence by the palace and the people of Mysore. goddess Chāmundi has been the tutelary deity of Mysore Royal House and the Protectress of the The icon in the sanctum shows the goddess in terrific aspect with the heads of the demons slain her strung in a festoon over the pedestal. There large and ancient temple car made of wood on w the goddess is taken out in procession at the end o famous ten-day *Dasara* festivities during Septem October every year. The Maharajas used to devote th selves to religious ceremonies during these ten holding a levee in the palace every evening with a p and ceremony which remained almost unchanged the centuries until the abolition of the princely order India gained freedom ended these practices.

The culmination of the festivities was a grand procession with the Maharaja seated in a golden ho and hundreds of colourfully attired retainers, tro guards, musicians and others forming the vanguard entourage over an eight-kilometre route lined by adm crowds. Though much of this is only a memory no *Dasara* festival is still observed as a people's show. brilliant electric illuminations are still there, and *Dasara* exhibition attracts large crowds. But what once a truly royal procession is now a municipal with a populist orientation.

In the centre of the city is the fort with the main pa which was built six decades ago on the site of a palace destroyed by fire in 1897. This is an impres structure in the Indo-Saracenic style of architecture is distinguished by Hindu style pillars, columns brackets and Muslim style arches. It is built entire

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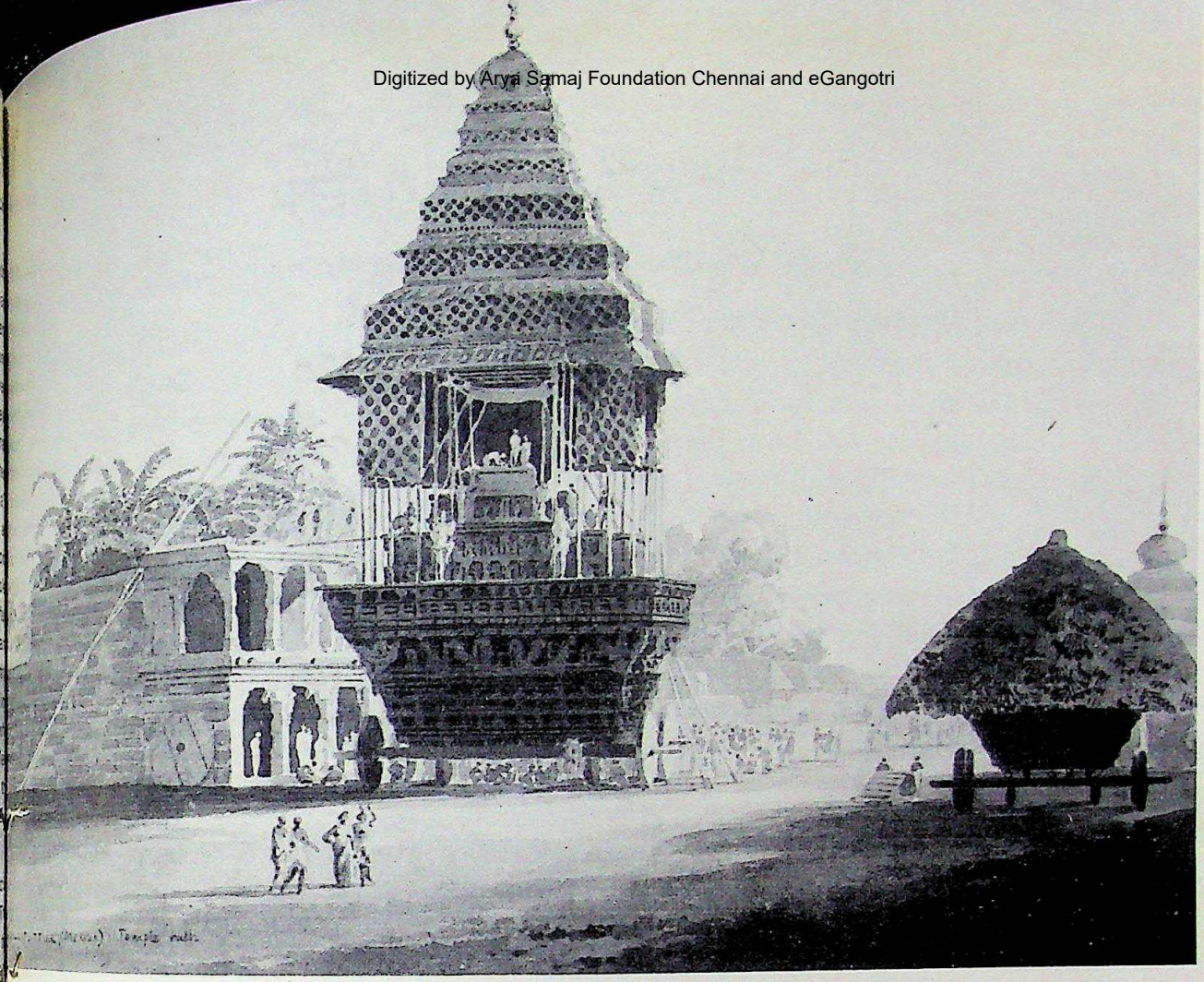

...e car at Srivillipintur, Madras, by Thomas and William Daniell, photographed by Geremy Butler, London, and reproduced by courtesy of the Royal Institute of British Architects.

...ance of the market is heady. Scores of women squat ...ers selling strung flowers and betel leaves. Bananas ...mangoes are in great demand. One can spend hours ...s about the market and enjoying every minute of it.

...the shopping centres and market, business is trans-...t amidst friendly banter and bargaining. Some shop-...ers have a tendency to encourage conversation at ...ost of business; they are generally surrounded by ...ds and well-wishers, making it sometimes difficult for ...omers to catch the shopman's eye. Nobody is in a ...ehurry. People gather in small knots on sidewalks to chat ...eakeasy animated discussions. Street corners and ...alks have long served as informal social centres not ...for the rank and file but also for some of the elite in ...ore City.

...Mysore, royal mansions have been transformed into ...t, research centres and educational institutions. The ...ilhan Palace, which was built to serve as a ...of royal ceremonies, has been converted into a ...m, art gallery and theatre. Two reminders of British ...cial days merit mention: The Residency, a Doric style ...ture built in 1805 by Major Wilks, is now a guest ...e. It was here that Sir John Malcolm, who was ...dent in Mysore (1803-1807), lived and commenced ...g his well known *History of Persia*. Wellington Lodge, ...and occupied by Colonel Arthur Wellesley who was in charge of Mysore from 1799 to 1801 and later became the Duke of Wellington, is now a school.

Mysore City is an ideal jumping off point for some famous wild life reserves. Bandipur, eighty kilometres south of Mysore, is a game sanctuary where one may see elephant, tiger, bison and other animals in their natural state. Ranganathittu Bird Sanctuary, sixteen kilometres to the north, is an island on the Kaveri river where migrating birds come for a brief rest every year on their great trans-Asia flight from north to south. Nagarholé, thirty kilometres to the west, abounds in tigers. Other places within easy reach of Mysore are the historic ruins of Srirangapatna, the terrace gardens of Krishnarājasagar, the exquisite Hoysala temples of Somnāthapur, Belur and Halébid, and the charming hill station at Mercara, head-quarters of Coorg District which is the land of orange, coffee, honey and wild rose.

Mysore City has a distinct character which it may find difficult to preserve in the face of growing demographic and economic pressures. In the years ahead it may develop into a larger city, become more prosperous and proud of its growing industrial strength. The people may then have to change their leisurely and cultured ways and come to terms with a faster pace of life. It will be a pity if, in the process, Mysore becomes like many others, 'just another city' without a soul.

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HEMISPHERE

AN ASIAN-AUSTRALIAN MONTHLY

NOVEMBER 1973

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HEMISPHERE

Editor: KENNETH RUSSELL HENDERSON
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The painting on the cover, 'Lonesome Figure', is by Khoo Sui Hoe, a leading young Malaysian painter.

The photograph opposite, by Ray Skobe, shows sunburnt country near Mount Olga, in the south-west of the Northern Territory.

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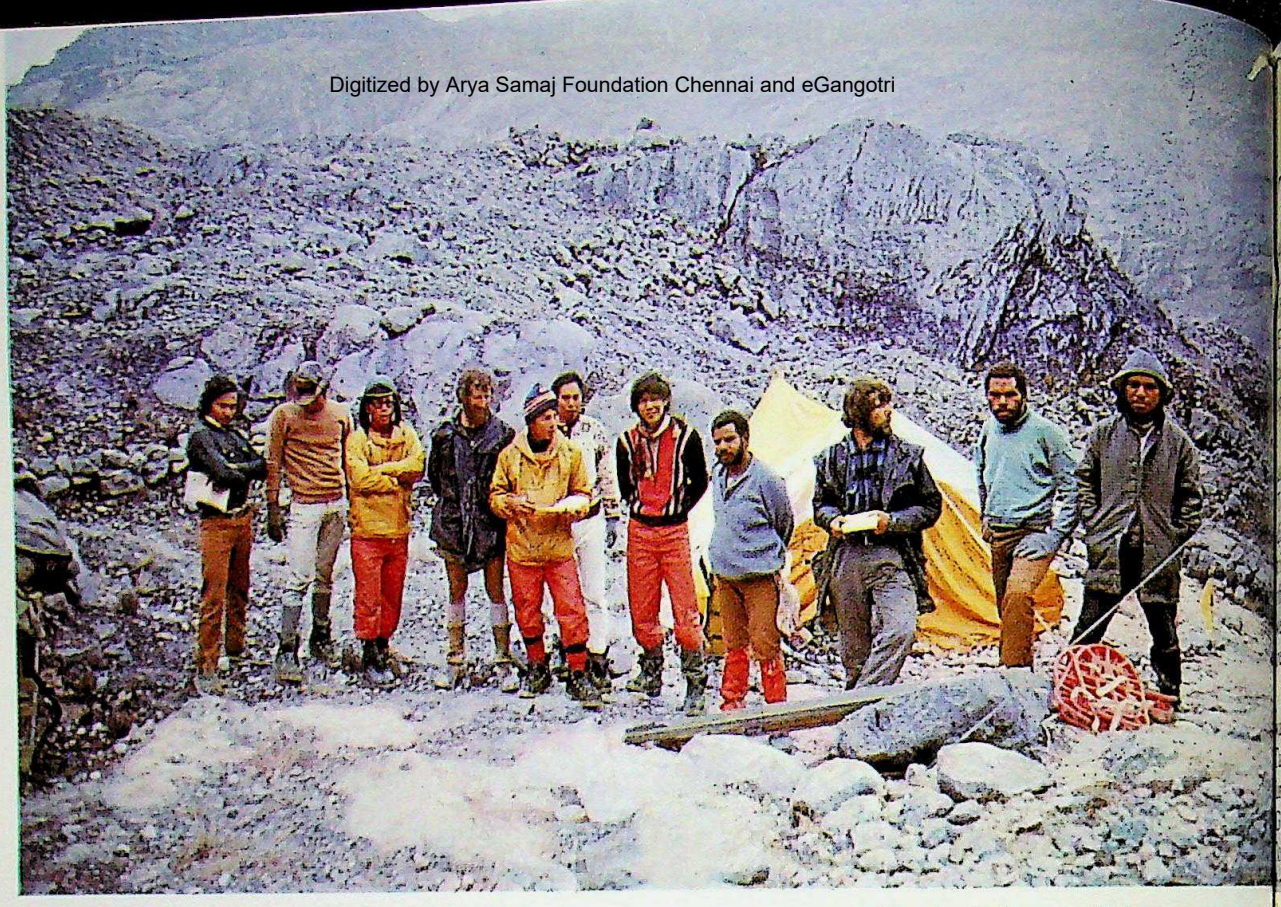

Indonesians and Australians at Mapala camp in the Meren Valley, in February 1972.

Ekspedisi Ilmiah Puncak Jayakesuma

James Peterso

On a glacier only four degrees from the equator, early this year Australian researchers and their In-
nesian colleagues demonstrated, for the second time in twelve months, such a degree of co-operation a
working level as to justify hopes for even more closely integrated scientific activity along similar lines in t
future. The following article (its Indonesian title means 'A Scientific Expedition to the Top of the Jaya Mo-
tains') is by the leader of the 1973 Carstensz Glacier Expedition from Australia to Irian Jaya (West Irian
a geomorphologist from Monash University, Melbourne, he had been a member of the expedition's
cursor, which was mounted at the turn of 1971/72. The photos are by Richard Muggleton, who was
with the earlier expedition.

Glaciology, meteorology, geomorphology, biology and surveying — these were some of the special in-
ests of Australians taking part this year. They made their first stop in Irian Jaya at Jayapura, on the n
coast, and then flew to Ilaga, a mountain village from which they undertook a tough sixty-mile hike to
glaciers. Among the Indonesians who joined in were officials of MAPALA-UI, the Student Naturali
Society from the University of Indonesia.

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THE GLACIERS of Irian Jaya (formerly West New Guinea), the only glaciers in Indonesia, are on the highest mountains between the Himalayas and the Andes. Until the first decades of this century they were still part of the 'last unknown'; in northern Europe, at least, geographical societies could be assured of a full house on those nights when the speaker was to talk about New Guinea.

The Snow Mountains of what was then, nominally at least, Dutch territory attracted special interest. To get to them involved an expedition across disease-ridden coastal swamps inhabited by hostile tribes, through thick forests in precipitous country often composed of jagged limestone dripping with but lacking in surface water, and thence to the snow-line, the tundra, and the ice.

The largest ice fields in Irian Jaya are in what was then known as the Carstensz area. In 1623 Jan Carstensz, a Dutch navigator, sighted from the Arafura Sea the snow-capped peaks of the highest parts (Puncak Jayakesuma) of New Guinea's Central Cordillera, and reports of the tropical glaciers filtered through to Europeans growing ever more excited about far-away places and strange things.

All early attempts by Europeans to go to these ice fields were made from the south coast. In some ways, the choice was unfortunate. Deceptively close (about a hundred and twelve kilometres) to the landing places in the mangrove swamps, the glaciers were guarded beyond the labyrinth of coastal distributaries by swampy jungle, then rugged terrain cut by deep valleys, most of which ended in very steep cliffs that culminated in the crestal ridges of the Cordillera.

The difficult nature of the country is indicated by the fact that Major Rawlings' British expedition of 1910-11 spent fifteen months along the Mimika River, saw the glaciers some one hundred times, but came nowhere near the ice. Persistent bad luck dogged the expedition. Although scientific results were achieved, they related only to lower country north of the ranges.

A. F. R. Wollaston, a member of this expedition, realized that success in exploring the ice field would be achieved by those who chose the river basin that led most directly into the high valleys with access to the glaciers. He returned to New Guinea and spent from September 1912 to April 1913 with a second expedition, this time in the valley of the Utakwa River. Most of the journey was made by canoe, the paddlers and guides being a group of seventy-four Dyaks; the supply line was maintained in the same way. (A younger relative of one of these Dyaks was to make the second ascent of the highest peak, Carstensz Pyramid, in 1972.)

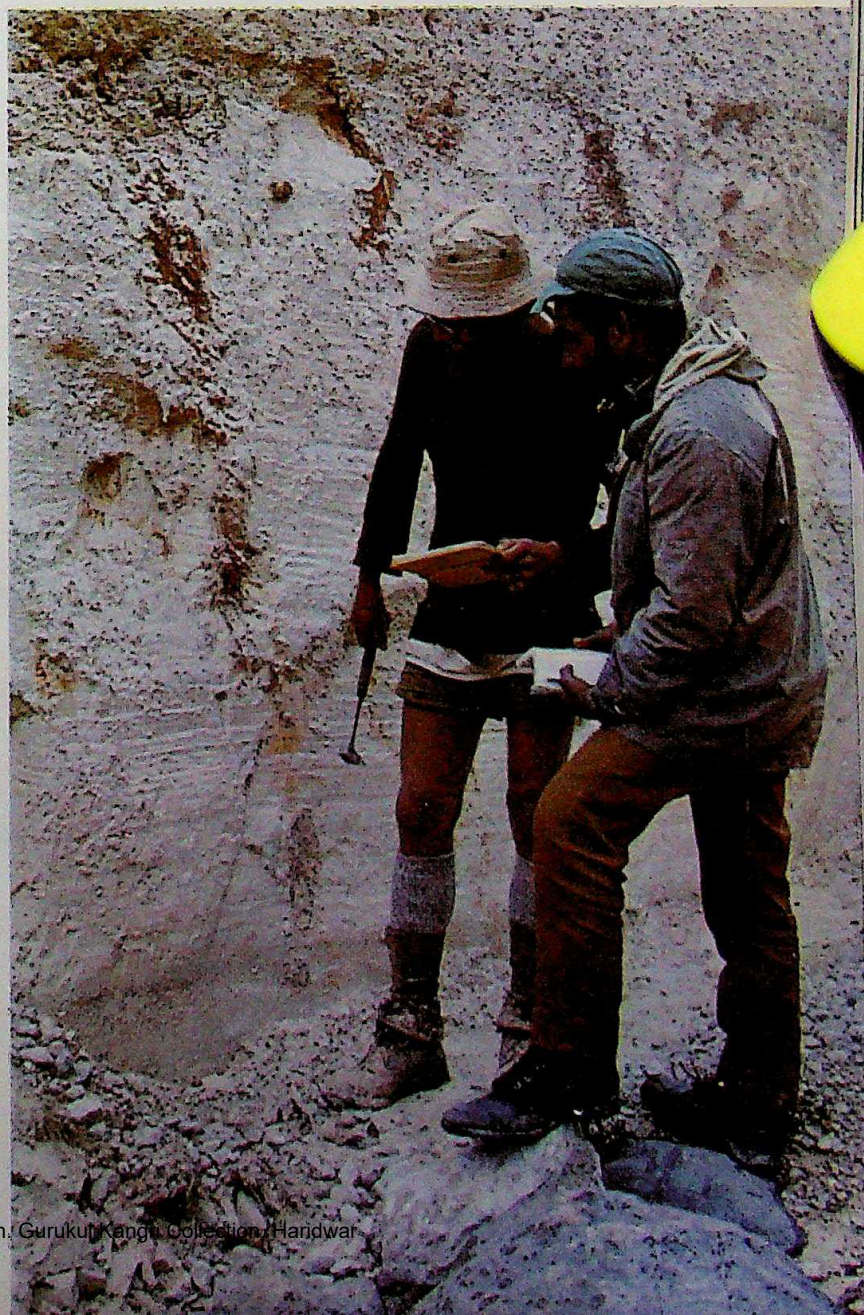
In February 1913, Wollaston, his resources and endurance completely extended, had to be content with reaching one of the precipitous southern ice margins, together with the botanist, Kloss.

More successful was the ascent of Mount Wilhelmina (Puncak Trikora) by a Dutch expedition of the same year. The geologist of that party, Dr. P. Hubrecht, again ascended the same snow-capped peak in 1921, this time from the north. Puncak Mandala was first ascended by a party of Dutch scientists in 1959, when it was known as Mount Juliana. The ice dome that covers its summit can be seen from Papua New Guinea.

The tropical ice masses in other parts of the world have been shown to be diminishing, and the results of the recent Indonesian and Australian Carstensz Glaciers Expedition show that the same is true of the tropical ice of New Guinea.

The main (valley) glaciers of the ice fields

Michael Rumbiak, Lecturer in Geography at Unchen University, Jayapura, points out features of lamination in lake deposits over-ridden by neoglacial deposits.



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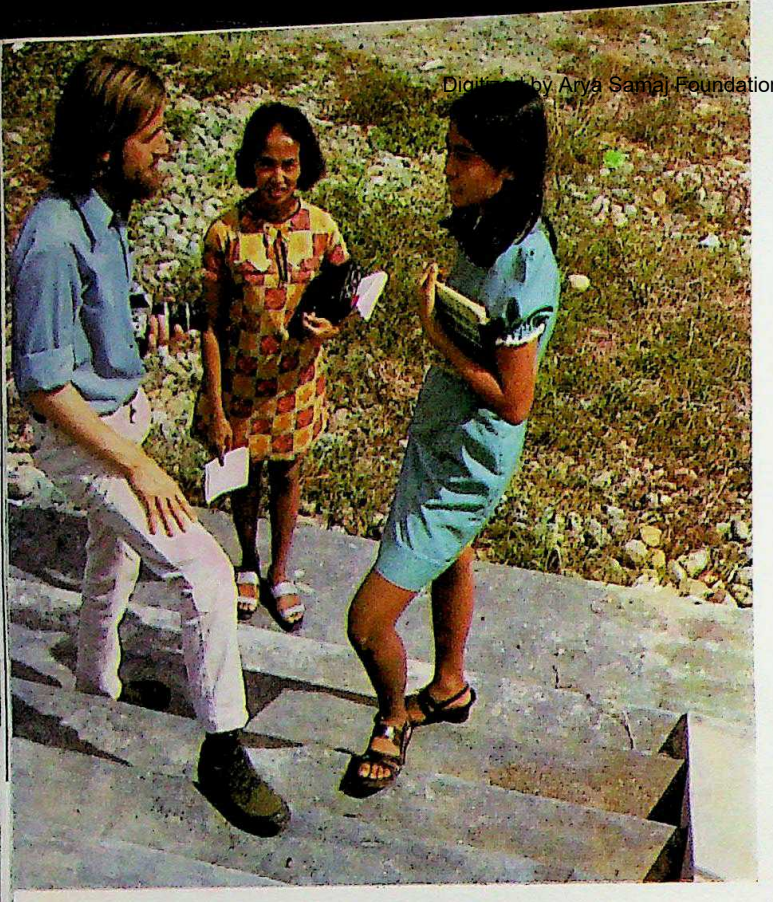

At Unchen University, Richard Muggleton, photographer for the Australians, talks with English language students.

have retreated more than two kilometres over the last hundred years or so. Since first visited in 1936, the Meren Glacier has retreated about 1,430 metres.

It is possible to make such a statement because the Dutch geologist, J. J. Dozy, now professor at the Technical University of Delft, thoughtfully placed a cairn at a known distance from the ice front. His party was the first to climb the ice domes around the Nordwand Firn, having used a seaplane to help choose a suitable route from the south coast which led them directly to the Meren Valley. Between then and Heinrich Harrer's expedition in 1962 the three domes along the Idenberg Ridge had b reduced to one, that of the Idenberg top itself. Ph graphs of the summit of Puncak Mandala sh that ice retreat has occurred, and a visit to Pun Trikora by a missionary in the late 1950s sho that the ice mass described and photographed Hubrecht had disappeared entirely.

This retreat, known in other parts of the wor follows the last of a series of minor glacial advan that have been the general pattern for mount glaciers since the end of the 'warm interval' ab five thousand years ago. These are known as neoglacials, in contradistinction to the major clim deteriorations accompanying extensive glacial acti that have characterised the last few million years the earth's history. On the geological time sc these climatic changes were large, violent frequent.

Among the terrestrial, geological evidence for sequence of events, that indicating the changes ice extent is often readily interpreted. The glac evidence in tropical areas is not particularly ex sive, and the scientifically little explored mount of Irian Jaya are something of a magnet to scien studying the modern atmosphere and its relation with the health of modern glaciers, as well as those curious to find out the sequence and magni of climatic changes of the past.

During the build-up of the great ice age glac that covered large areas of North America, Eur and parts of Eurasia, world sea levels fell at l ninety metres. In consequence, the Arafura Carpentaria and Torres Strait areas were dry, there was a broad land bridge between Aust and New Guinea. It is probable that during period of maximum cold the glaciers were sta of snow, because the south-westerlies from northern Australian region would not have pa over warm tropical seas before rising across Central Cordillera.

Damil tribesmen build a temporary foot-bridge across a stream on the mountain slopes.

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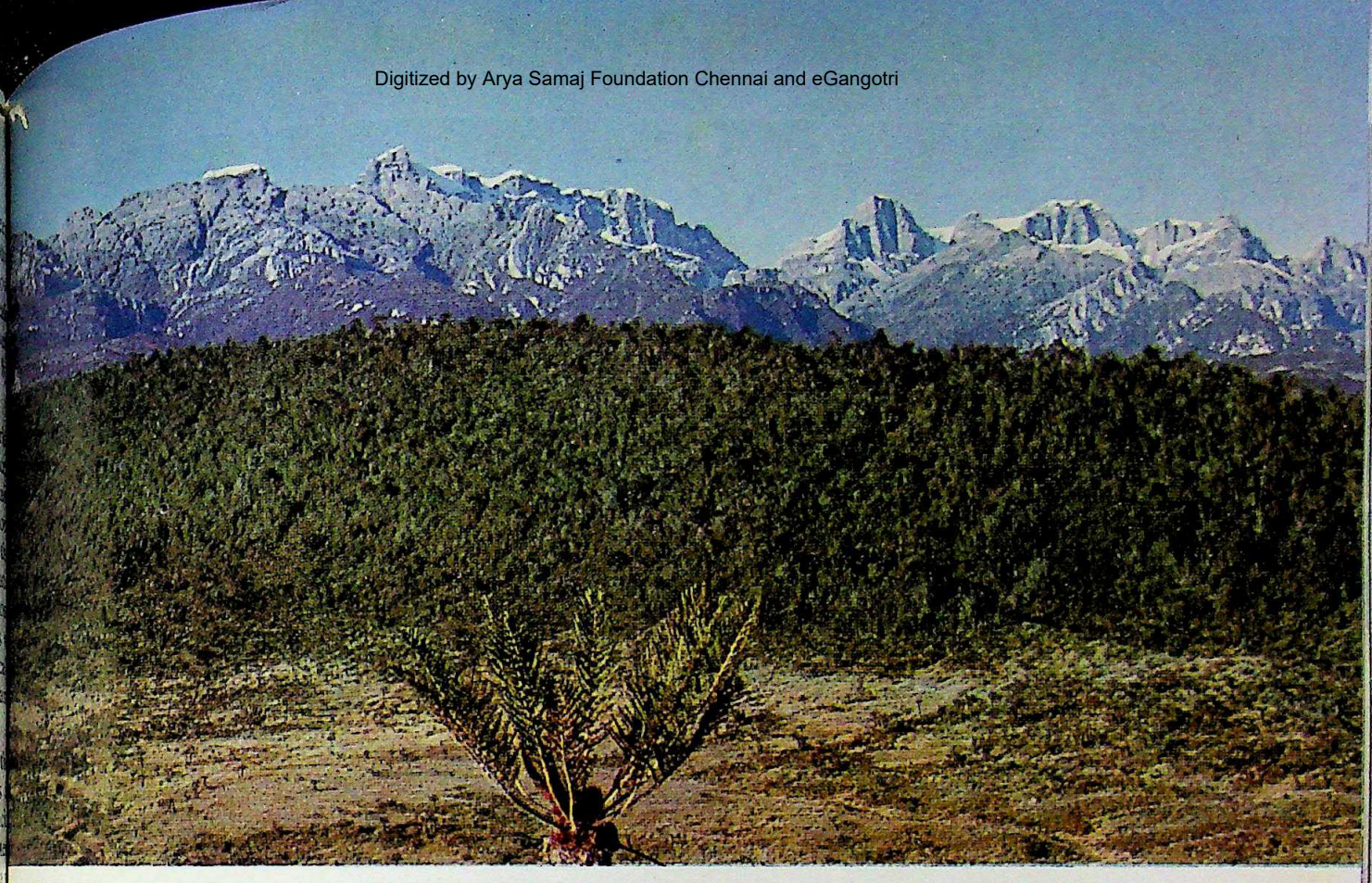
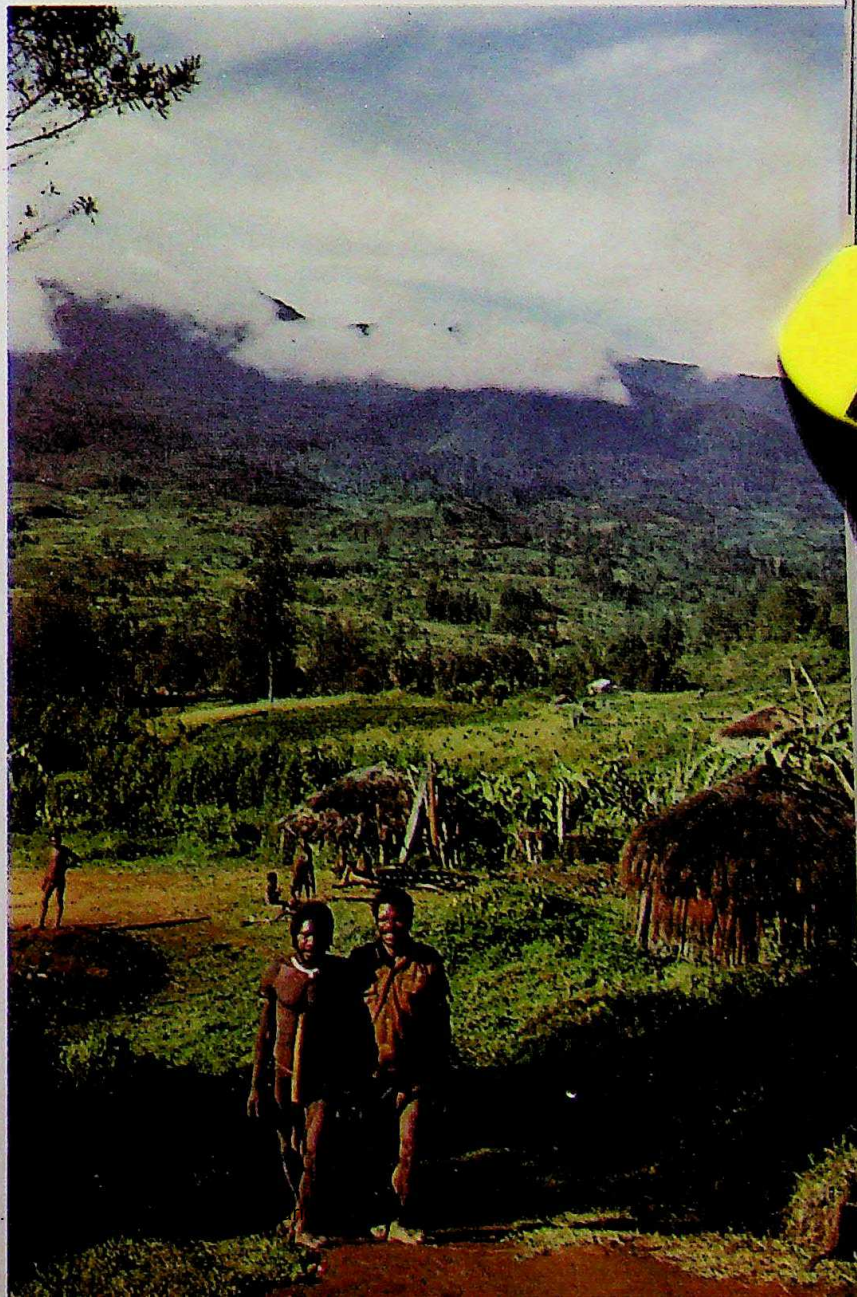


LEFT: The northern scarp of the glacier-covered Jaya Mountains towers above Cyathea *grassland and wooded ravines of the Kemabu Plateau.* RIGHT: *Dani tribesmen in Irian Jaya grow sweet potatoes and other vegetables and keep pigs. The elevation is about 2,300 metres.*



Ten thousand years ago, when the ice age was ending and sea levels continued to rise as a result of the melting of the northern hemisphere ice sheets, there was a major advance of the glaciers. It was short-lived, and was probably the result of sudden increases in precipitation in response to the cooling of the Arafura Shelf region.

The earlier neoglacial advances and the warm period that preceded them and followed the end of the ice age are reflected too. The warm period, known as the hypsithermal, probably saw the disappearance of the ice bodies of Irian Jaya.

The tree-line was probably higher, because the remains of animals now much more plentiful at higher elevations were found in what is taken to be the 'kitchen' of a rock shelter at about four thousand metres. Some of the remains were radiocarbon-dated as being about five thousand years old.

The bone and charcoal layers were overlain by deposits that contain no evidence of human activity. The bones were cracked open in the eating, in a way uncharacteristic of the present highlanders. Were these earlier inhabitants a different people? Does the prehistoric archaeology of deposits such as these shed light on the coming of man to the Australian continent?

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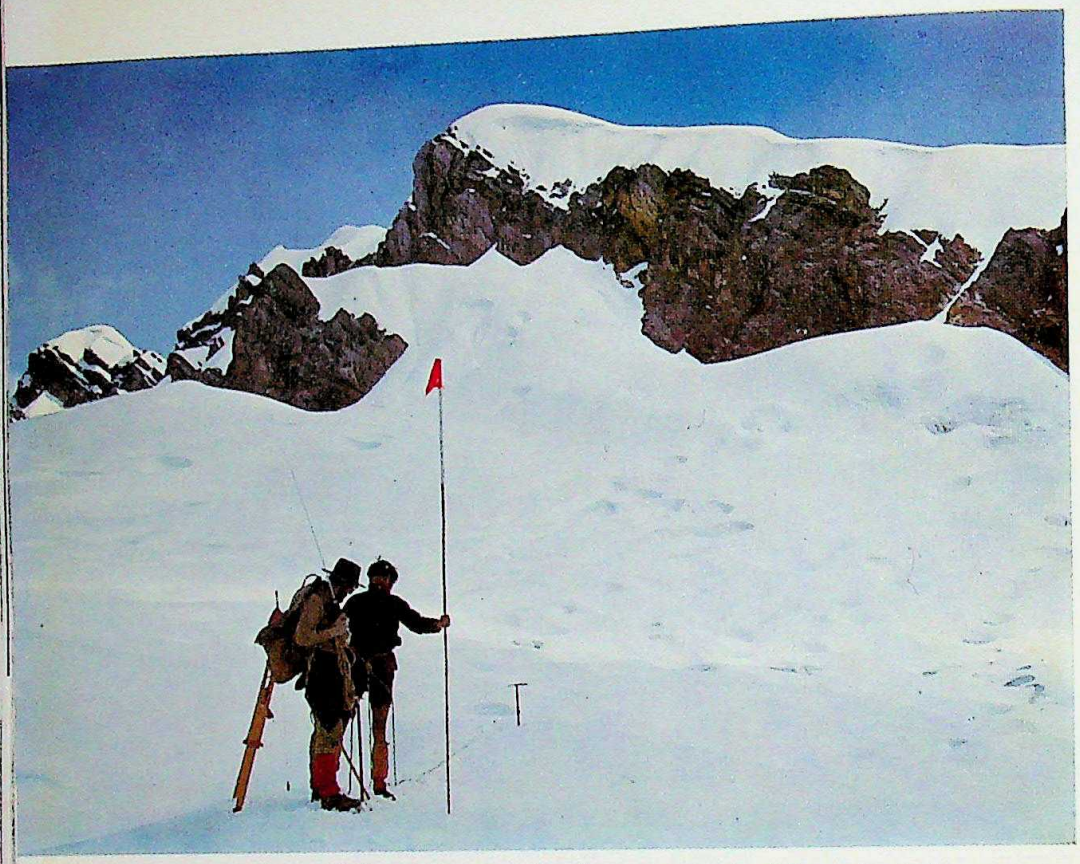

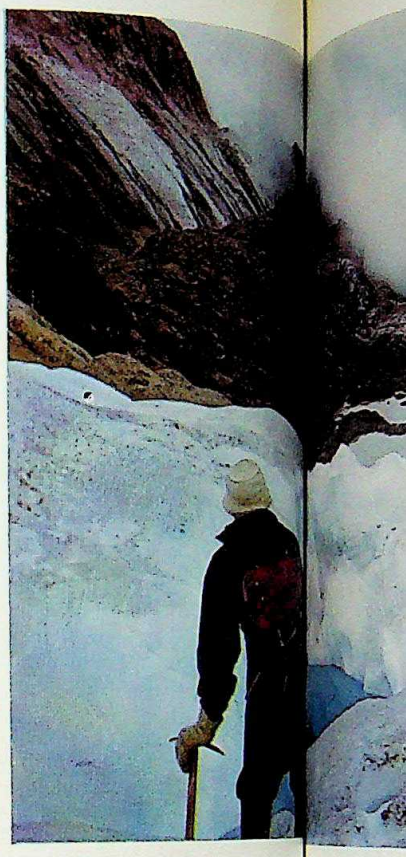

Accumulation stakes were placed on upper parts of the main glacier.

...gal colonies abso...

Man is now known to have inhabited Australia for more than thirty thousand years. But the links between early man in Australia and the migrations of people in the areas adjacent to the north is a matter for future co-operative study by scientists of Indonesia, Papua New Guinea, and Australia.

Investigations will rely not only on site excavations but also upon the vegetation history of the area, now being progressively written up region by region at the Australian National University. This history is based on the analysis of fossil pollen grains from bogs and swamp deposits. Cores from post-glacial swamps in the Puncak Jaya were collected by both the 1971-72 and 1973 expeditions as part of this programme.

The postulated warm period was followed by the neoglacial advances, evidence for which is well preserved in a sequence of soils and lake deposits buried by debris laid down by over-riding ice. Dating of the soil materials gives a maximum age for the glacial advances of two thousand four hundred to two thousand nine hundred years, corresponding to the second major neoglacial period.

The retreat of ice from the third neoglacial period has already been mentioned. The negative glacier mass balance implied is probably due to a warming of the earth's climate, rather than directly to chang... in the amount of snow precipitation.

This general warming, indicated by data fro... many different sources, is of great interest to atmo... pheric scientists, the major concern being elucidati... of the extent to which increased and man-induc... carbon dioxide and dust content of the atmosph... is responsible. Therefore, there is a need to ke... track of the climatic changes in as many parts ... the atmospheric 'heat engine' as possible, and d... from such high, remote, tropical locations as t... Jaya Mountains is a major filler of gaps in o... knowledge.

Studies of the present environment included ma... ping, vegetation and faunal surveys, recordings ... ice temperature and movements, and examination ... the prolific cryo-vegetation on parts of the melti... tongues of the main valley glaciers and the relea... 'coloured snows' above them. Weather records we... gathered, and routine collections of plankton fro... the lakes and bird skeletons from the glacier w... made.

The more adventurous side of the expediti... included treks across the Kemabu Plateau ... ascents of some major peaks of the Jaya Mountai... For instance, the second expedition spent eight d...

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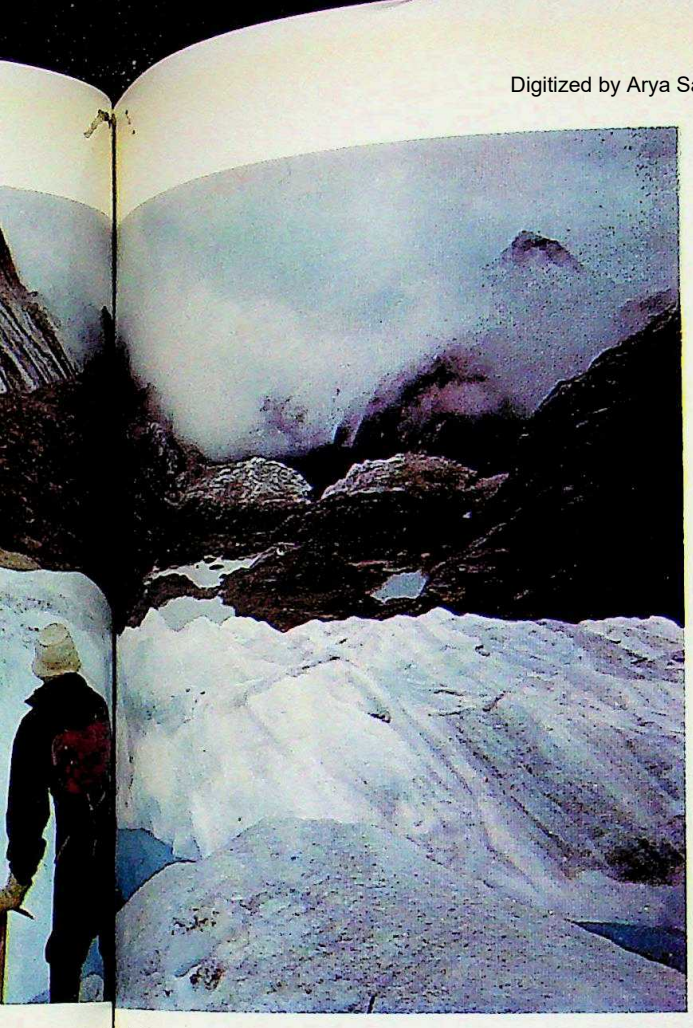
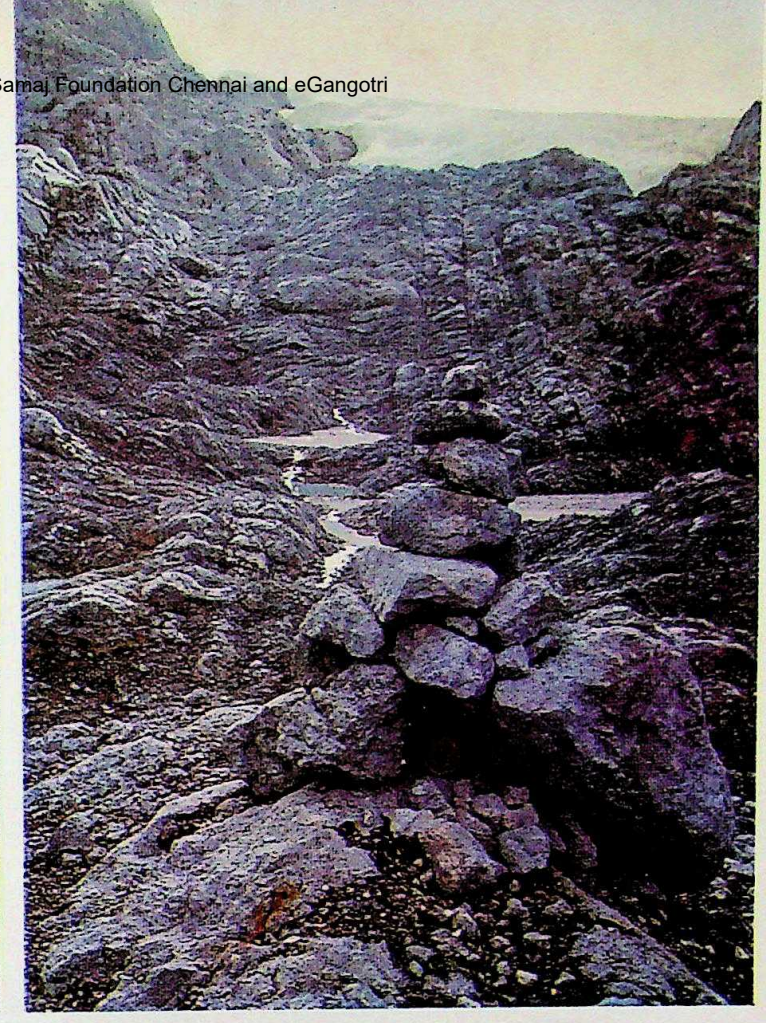


...al colonies absorb sunlight and melt lakes into the ice.



A cairn left near the ice front in 1936. The ice has since retreated.

The route across New Zealand pass is often powdered with snow.

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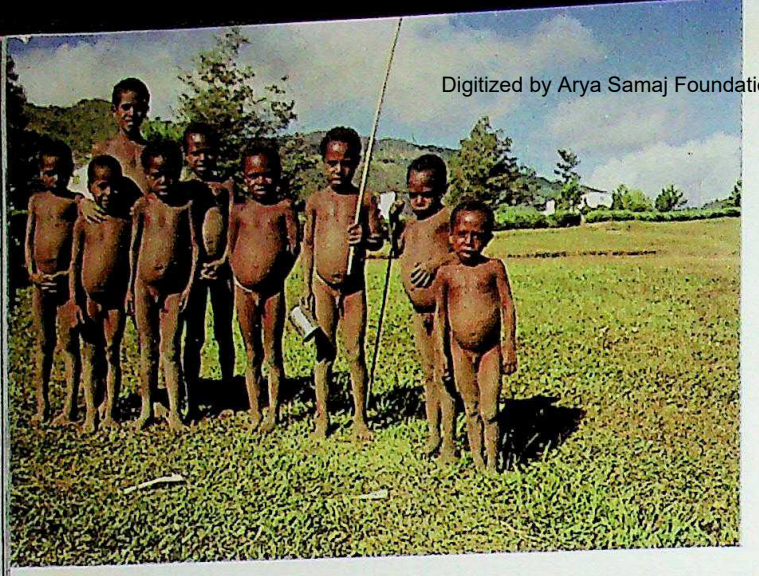
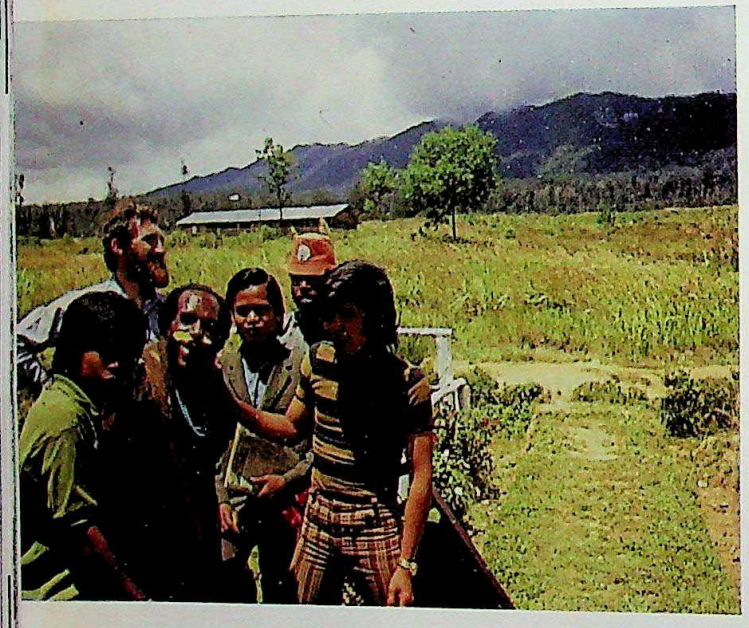


ABOVE: *Dani youngsters, curious about the expedition but wary of coming too close.* BELOW: *A Dani elder poses with officials near the Ilaga school house.*



walking more than ninety-five kilometres from Ilaga (2,286 metres) south and west to the high valleys in which base camp was established at 4,250 metres.

Some thirty western Dani men from the Ilaga, led by their preacher, Georit Wanimbo, were porters for the expedition, which followed one of the local routes across the mountains — as did the first post-war expeditions before ours. These were climbing expeditions intent on claiming hitherto unclimbed peaks of the Dugundugu, as it is known around Ilaga or, as it is just as often referred to now in the very effective lingua franca, Bahasa Indonesia, *Gunung Es* (Ice Mountain).

Most of the locally used routes do not cross the height of land near the ice fields but use lower passes to the east and west. Since the visits of the mountaineers, however, the way up Discovery Valley to Lakes Larsen and Dugundugu and then up and over a pass in the great north face of the Jaya Ma has become known to both western Dani and th Damil and Amume neighbours alike.

The routes start among some of the highest swe potato gardens and climb through the mountain ra forest to the limestone plateau country with *Cyath* grassland and, higher up, well marked moraine ridg clothed in low trees and shrubs. On the plate there, densely fluted and jagged limestone thrusts u from a now vegetated superficial layer of glacia debris. These outcrops escaped being complete plastered by moraine deposits during a glacia advance. Subsequent exposure to the atmosphe has caused their surfaces to be dissolved in fantastic, sharp-edged, solution-weathering form that make a startling contribution to the mood the landscape.

The main peaks of the Jaya Mountains inclu the very highest, named the Carstensz Pyramid earlier maps and currently called Puncak Jay kesuma. It was first climbed in 1962 by Heinri Harrer, who wrote *Seven Years in Tibet.* Sin then, a party from the Student Naturalists' Socie of the University of Indonesia (MAPALA-UI) an a party from the Hong Kong Mountaineering Cl have made the climb.

Opinion differed concerning the height of the pe A survey marker was placed on the summit the expedition's surveyor, Ted Anderson, of t University of New South Wales, and myself; t elevation was found to be 4,884 metres, aft intersections were made from other points establish by triangulation from a base set by a south co mining company.

Other peaks in the area were also surveyed: N Pulu is 4,860 metres, and the Idenburg top is 4,6 metres. Although not as high as more famo glaciated mountains elsewhere, they are high enou to require climbers to be acclimatised. In futu they are likely to attract the attention not only Indonesian climbers from MAPALA, Jakarta, an Unchen University in Jayapura, but many others well.

To me, however, the scientific interest is para mount. There is much potential for mutually bene ficial endeavour, with scientific expeditionary team composed of Indonesian and Australian member and participation, perhaps, from Papua New Guine Many interesting and significant questions are awa ing investigation and offer a wonderful opportun for young field workers to practise scientific inve gation and exploration in the spirit of internatio goodwill.

THE AUTHOR: *Dr. J. A. Peterson is a lecturer in geogra at Monash University, Melbourne.*

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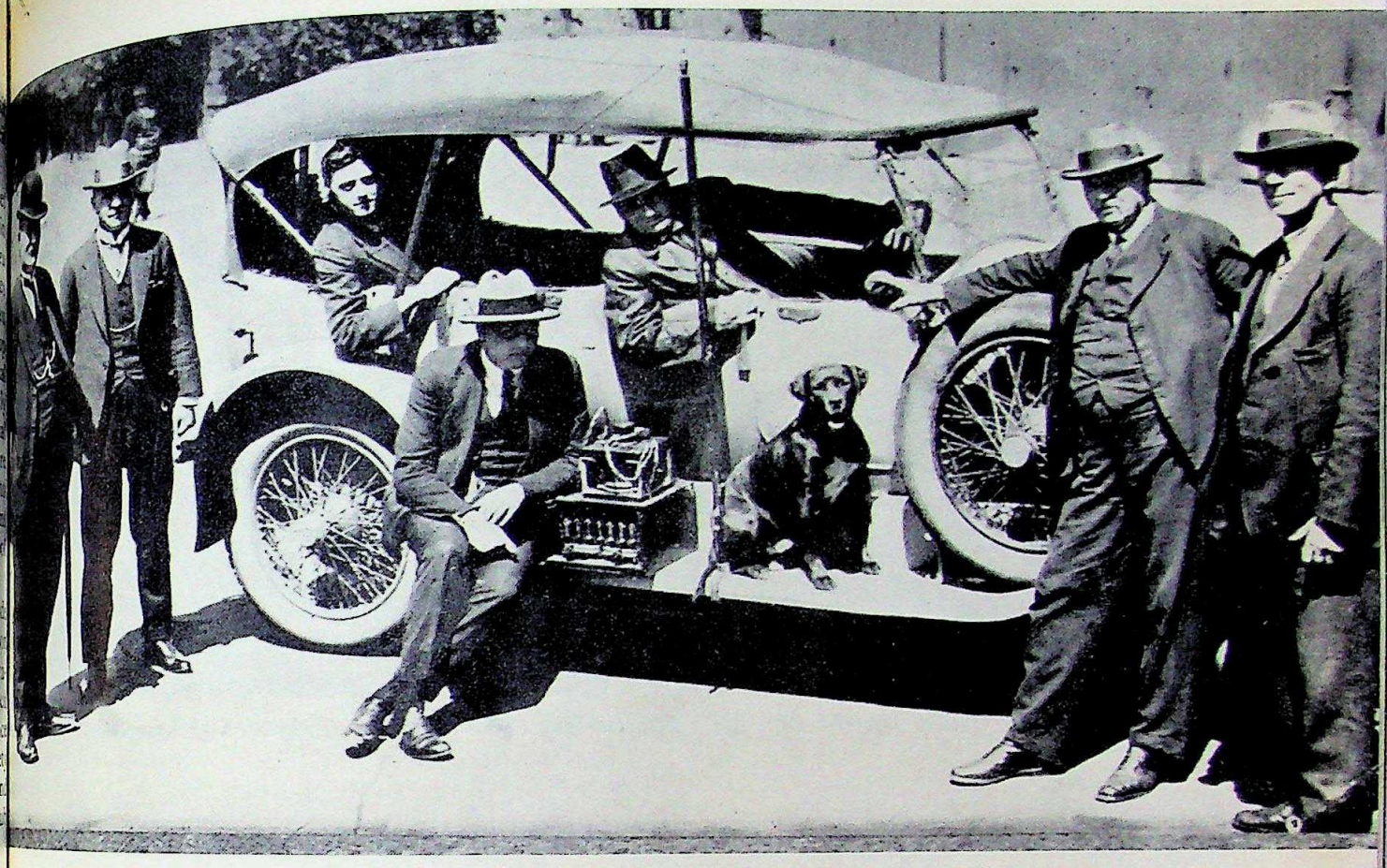

The original wireless patrol car and crew. The dog, presumably, was not a 'regular'.

FIRST WITH THE FASTEST

Rex Scambary

POLICE in the Australian State of Victoria don't like being outpaced by criminals. Each year the force adds to its fleet of fast patrol cars, the latest additions being two squads of V8 saloons capable of speeds of two hundred and thirty-three kilometres an hour, to help them curb reckless driving on the main highways. Each car has iridescent orange side panels with the word *Police* painted boldly in blue. The roof is topped by twin flashing blue lights and a loud hailer. When one of these 'speedy cars' appears, the most hardened speedster stops.

One man who isn't noticeably impressed is Tom Shea, who keeps a collection of about fifty ancient cars, buses and trams at his farm near Ararat in Victoria's Western District. The pride of his collection is an elegant 1930 Daimler which served in its time as a police wireless patrol car. The Victorian Police were the first in the world to use cars equipped with radio. The Daimler, still with some of its radio equipment intact, is thought to be the only car to survive from the early days of the Wireless Patrol Branch.

'I don't think the Daimler would be far behind the modern patrol cars', says Mr. Shea. 'It has a 7.5 litre straight eight engine. I am told that it once

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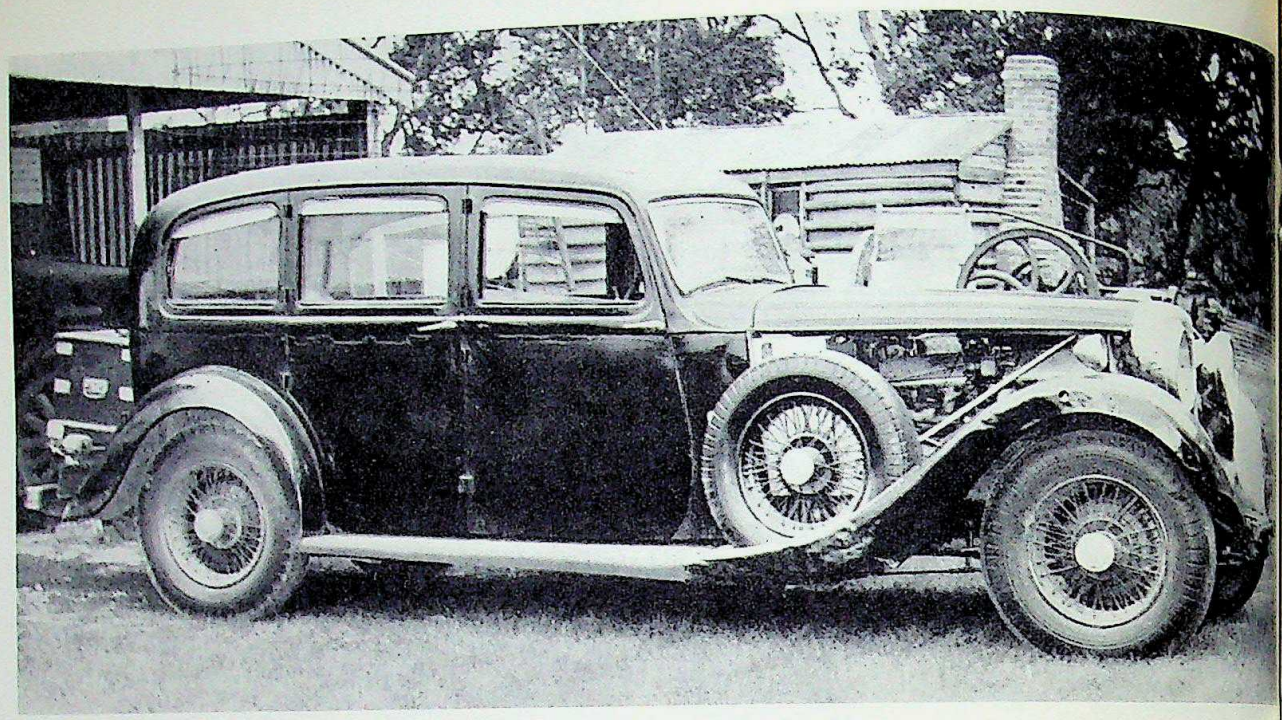

'The Grey Nurse', a 1930 Daimler with a 7.5 litre straight eight engine, now restored to its original condition.

touched more than a hundred and seventy-seven kilometres an hour on Melbourne's St. Kilda Road.' That was more than forty years ago when St. Kilda Road, a broad avenue that leads to Melbourne's southern suburbs, would have had a surface bumpy enough to rattle teeth even at low speeds.

The car was known in the force as 'The Grey Nurse', after a swift and menacing species of shark. 'The Grey Nurse', a big attraction for visitors to Mr. Shea's farm, is now restored to its original condition. When recently it was driven in Ararat's annual festival procession, it helped demonstrate the traditional stress that police in Australia have placed on mobility and good communications.

Large and sprawling coastal cities, a lightly settled countryside with long distances between towns, and a relatively low ratio of police per head of population favour a motorised police force. Victoria, for example, has five thousand four hundred police in a State of more than two hundred and thirty thousand square kilometres. The force uses about a thousand vehicles, including motor-cycles, and most have two-way radios.

Victoria's first crime car, a Hotchkiss, carried a crew of six around Melbourne. Their job was to watch for house and shop-breakers. They stopped at intervals of half an hour to telephone headquarters for leads, but often the information was too late.

The car often patrolled past Melbourne's Domain Wireless Station and this gave the crew the idea that radio might solve the communications lag. The Amalgamated Wireless Company of Australia built a receiver for the car, and an accumulator was mounted on the running board and connected to the receiver by a flexible lead. The Chief Commissioner wanted the equipment to be inconspicuous, so a small frame antenna was mounted under the hood. The precaution seems later to have been abandoned as some photographs of the car show it carrying an antenna almost as tall as the mast of a small yacht. The car bulged with policemen looking anything but a group of Sunday afternoon motorists.

The Hotchkiss took a party of senior police officers on its first radio trial one evening in November 1922. The Domain Wireless Station transmitted messages to the car at intervals, and all were received. It was the first police radio patrol car although police forces in New York, Chicago, London and Paris were quick to follow Melbourne's example.

The car was able to pick up signals easily from a range of sixty-four kilometres, but there was still only one-way communication. By 1923, Amalgamated Wireless had developed a small spark transmitter for the patrol. When the car was driven to the distant seaside suburb of Mordialloc to test the transmitter, it not only maintained good two-way contact with police headquarters but by chance communicated with a ship off Sydney Heads — possibly the first time that a ship at sea has had radio contact with a moving motor car.

The Hotchkiss tourer was succeeded by Lanc-

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One of the fleet of fast 'candy cars' the Victorian police department now uses to catch speeding motorists.

nd Daimlers — including 'The Grey Nurse' — and ter by American cars. The radio equipment became more sophisticated, and more costly. Today he nerve centre of the Victorian police is radio ration D 24, located in the police headquarters uilding in Russell Street, Melbourne.

Transmitters using AM (amplitude modulation), M (frequency modulation), VHF (very high fre-uency) and CW (carrier morse-wave) transmissions re used in conjunction with telex, teleprinters and utomatic microwave repeater stations to give D 24 ntact with police units throughout the State. D 24 also is Australia's central communications reau for Interpol, the international crime detec-n agency, and thus its links extend throughout the orld.

A crime is reported in Victoria, on average, very three minutes. The highest concentration is in tropolitan Melbourne, which has two-thirds of the ate's population of about three and a half million. elbourne is no less law-abiding than other cities f comparable size, but as population grows, so too es the incidence of robbery, bashings, car thefts, affic accidents and the numerous minor offences at keep police forces busy.

The police mobile units have a variety of *rôles*. me squads specialise in traffic control, or search d rescue operations for people missing in small eas or lost in the State's thick forests. But the ck troops', first on the scene of any major crime, the members of the Crime Car Squad — the new me given to the Wireless Patrol.

Each crime car, with a two-man crew, patrols a designated region. The crews can act on their own initiative, or on commands from D 24 where a staff of eighty policemen is employed on shifts, day and night, to evaluate and handle the thousands of emergency calls telephoned in by the public.

The men at D 24 who translate these calls into

An officer checks the compact two-way radio used by a policeman on the beat.

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directions for the mobile units are experienced members of the force — mostly sergeants — who have been selected for their quick reactions and sound judgment. Business is most brisk between 6 p.m. and 2 a.m., and the operators have learned to associate certain happenings — perhaps a change in the weather or a big horse-race meeting — with a likely build-up in calls.

Armed hold-ups have become more common in Victoria, and on one memorable occasion three were handled by D 24 simultaneously. When a hold-up is reported, D 24 makes immediate contact with the crime car in the area, then with other mobile units. Sometimes a roadblock is organised, but roadblocks are only occasionally successful, as they depend on an early alert and an element of luck.

'The normal pattern in a bank hold-up is for the bandits to make their escape in a stolen car', says Senior Sergeant Jim Faulkner, a veteran D 24 supervisor. 'After travelling a short distance, they almost invariably abandon the car and steal another. We might not catch the robbers immediately, but it is important to get men quickly to the scene so that investigations can be started. Once the crime cars are on the way, we can call in the specialists, such as experts in investigating armed robberies.'

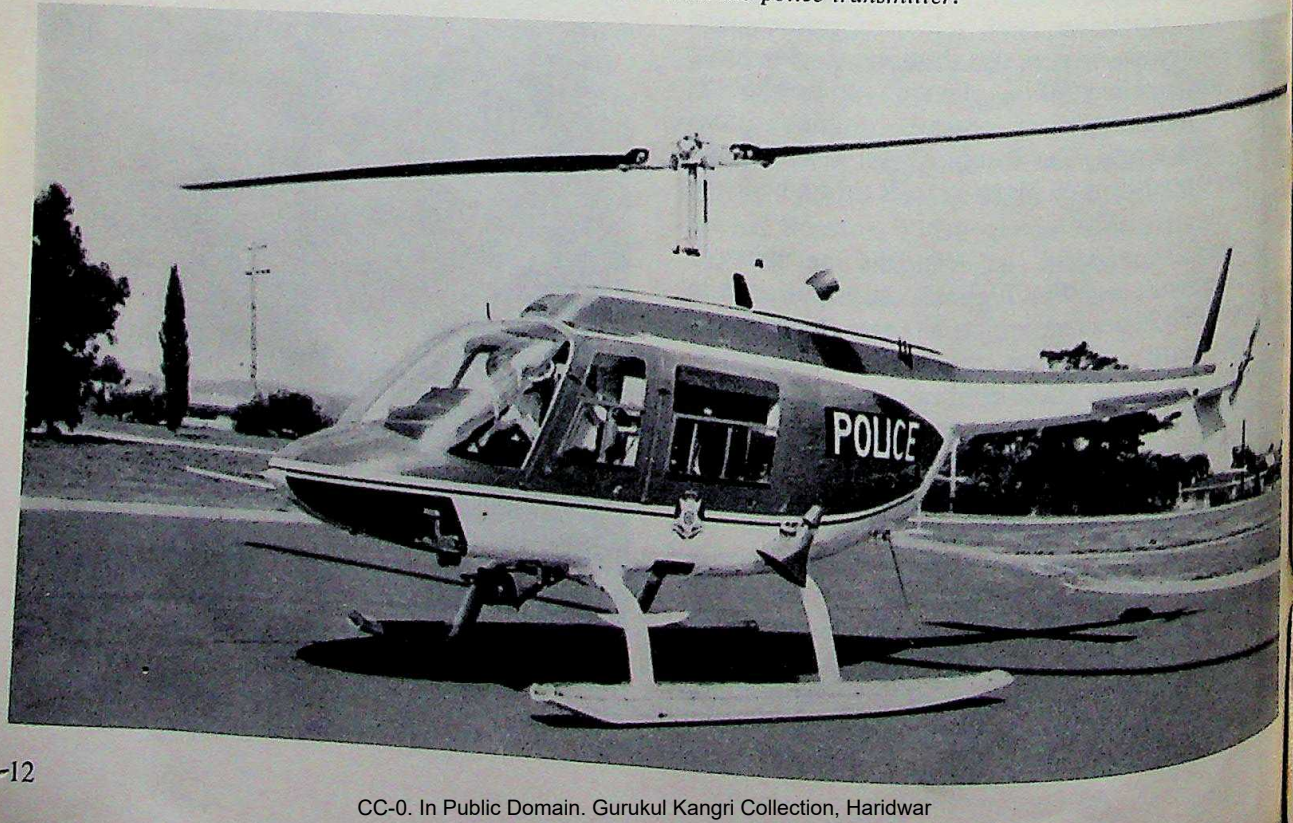
Victoria has a network of off-course betting shops operated by the State's Totalisator Agency Board (TAB). Some are in isolated suburbs and have become popular prey for armed robbers. When a betting shop is held up, an alarm is registered on the TAB's central computer, and D 24 can be notified quickly. Banks have emergency direct telephone links with D 24.

A writer in a 1926 edition of the Melbourne radio periodical, *Listener-In*, commented: 'Police officials proudly boast that the new receiving and transmitting wireless set installed at police headquarters recently at a cost of [$2,400] comprises the finest police radio system in the southern hemisphere'. This might have been true in 1926, but the force recognises today that with population growth and the more complex nature of police work the present communications system leaves much to be desired. An expert from Britain's Home Office who was invited recently to examine the system recommended that the police should spend at least $2 million to bring it up to standard.

Policemen who pound the beat on foot are no longer considered the answer to crime in a highly motorised society. But lately the Victoria Police Force has been returning men to the beat equipped with compact two-way radios. This allows the policeman on foot to talk to D 24, to other policemen on foot, and to mobile units.

In March this year the force mounted 'Operation Crime Beat', an experimental drive against crime which exploited the radio-equipped beat policemen.

The Victorian police have been experimenting with this helicopter in traffic control work and crime checks. Two-way radio contact is maintained with the police transmitter.



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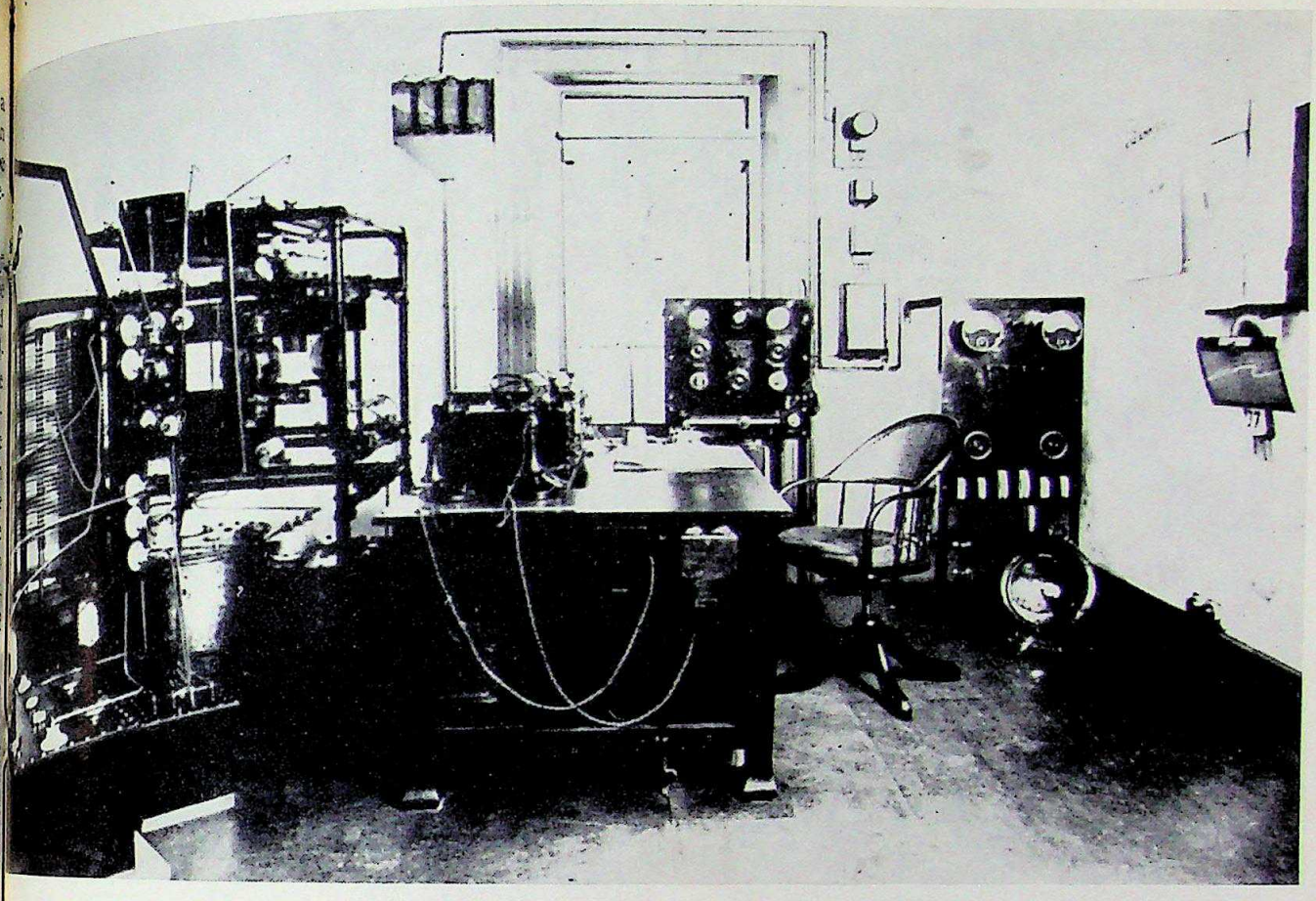

Melbourne's first police radio transmitter.

...ey concentrated on robbery-prone commercial ...es and the operation led to a number of arrests. ...e mobile radios have a range of about eight ...ometres, but this can be increased greatly if the ...nals are transmitted from the patrolmen to D 24 ...ough automatic repeater units in the crime cars.

Apart from the control of crime, the police radio ...work has been an essential aid in traffic and ...wd control and in the organisation of large State ...ivities, such as the Melbourne Olympic Games in ...6 and, more recently, the fortieth International ...haristic Congress, which brought many thousands ...visitors to Melbourne in February this year.

...Victoria's expanse of volatile eucalypt forest, dry ...mer climate and high temperatures make the ...e particularly prone to forest fires — 'bushfires'. ...'Black Friday' — January 13, 1939 — seventy- ...lives were lost and millions of acres of forest ...troyed in fires that engulfed much of the State. ...On January 8, 1969, a day of soaring temperatures ...hot winds, most of Victoria's one hundred and ...thousand volunteer fire fighters were in action ...inst more than two hundred separate fires. One ...e swept across a main highway near Melbourne ...killed motorists in their cars.

...On such days the State Disaster Plan comes into ...ation. State organisations, such as the Country ...e Authority, the railways, the Electricity Commission and the Victorian Civil Ambulance, send representatives to the Disaster Room at D 24. The communications system is used by the Chief Commissioner of Police to co-ordinate emergency operations.

Police mobile radio units took part in the emergency work that followed the collapse of Melbourne's West Gate Bridge, when thirty-five workmen lost their lives on October 15, 1970. They also helped search for the body of a former Australian Prime Minister, Mr. Harold Holt, who was lost while swimming in the sea at Portsea, near Melbourne, in December 1967.

The lines will continue to run hot at D 24. The task might be an alert for a child lost in the bush, a call for reinforcements to restore order at an unruly political demonstration, a request for police to unsnarl a traffic jam after a football match. It might be the occurrence of a murder, or some man having an argument with his wife.

Today, radio communications have become part of almost every aspect of police work. The trend started when somebody in the early 'twenties had the bright idea of putting a radio in a motor car.

THE AUTHOR: *Rex Scambary, an Australian journalist, has spent some years in Asia.*

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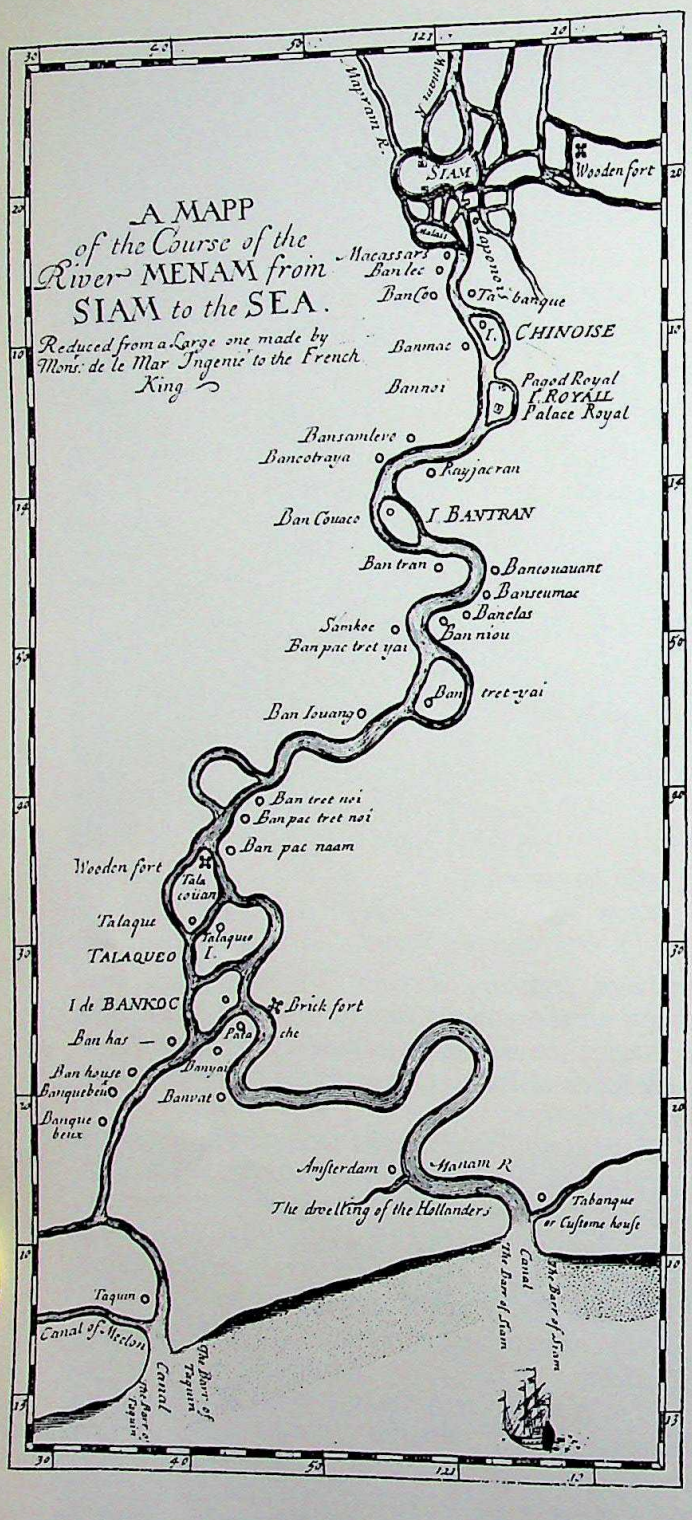

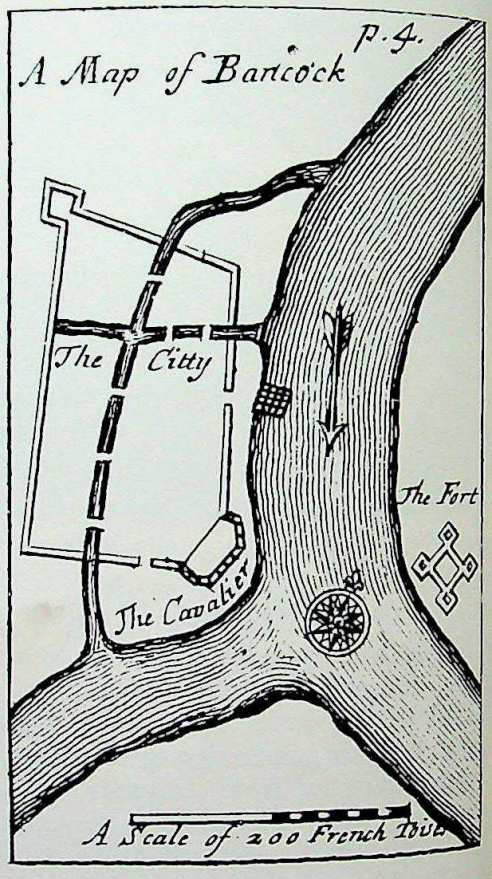

These two illustrations are from A New Historical Relation of the Kingdom of Siam. *by the French Envoy Extraordinary to the Thai King in 1687-88. 'Siam' in the map at left is Ayutthaya. The 'Brick fort' on the river's right bank corresponds to 'The Fort' in the map of Bangkok above.*

From Ayut

Larry Sternstein

AYUTTHAYA, capital of the Thai kingdom for four hundred and seventeen years, was stormed and taken by the Burmese in 1767 after a siege, maintained for more than a year, despite the seasonal floods of the Chao Phraya river. The siege is graphically described in the *Hmannan Yazawindawgyi*, the Burmese Annals.[1]

There are two eye-witness accounts of the fa

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From Ayutthaya To Bangkok

of Ayutthaya. One, in Dutch, is in a two-page handwritten official statement, a *procès-verbal*, drawn up and signed by the *Shabandar*, or harbour master, at Batavia on April 26, 1768.[2] The witnesses were an Armenian who was head of the Europeans at Ayutthaya, and a Muslim priest. The *Shabandar* took the trouble to record the statement officially because it confirmed that the factory, or trading post, of the V.O.C. (Dutch East India Company) at Ayutthaya had been destroyed.

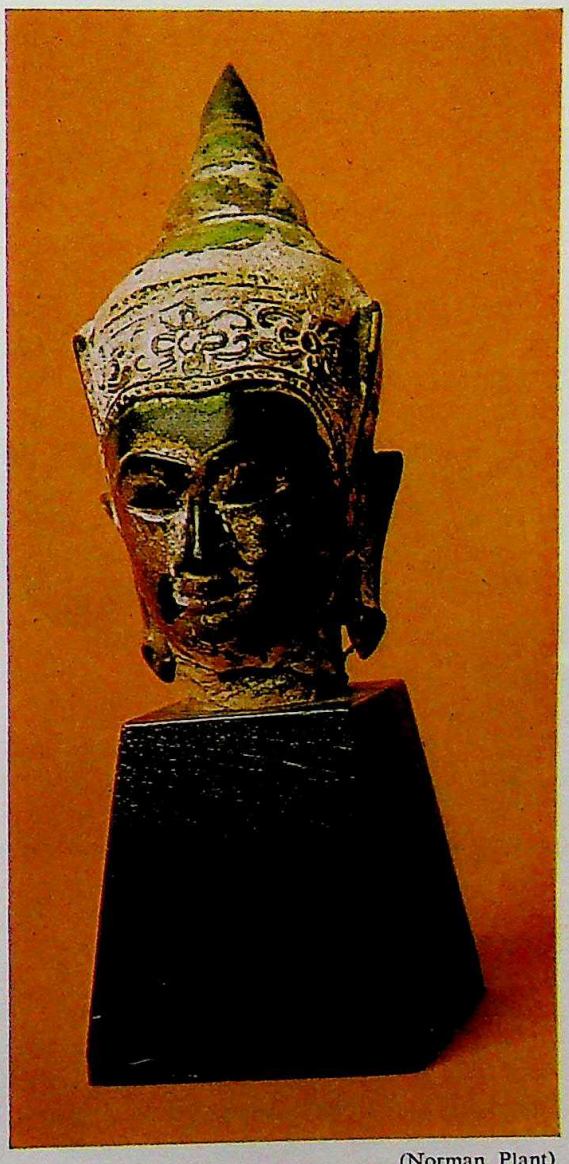
A second eye-witness account, in French, is alluded to by Turpin in his *Histoire Civile du Royaume de Siam et des Révolutions qui ont Bouleversé cet Empire Jusqu'en 1770* (Volume II, Paris 1771).[3]

These two accounts differ somewhat in detail, and are different also from that given by Wood in his *A History of Siam*, which is based on *Luang Prasert's History* and Prince Damrong's *History of the Wars Between Burma and Siam*. Each account contains questionable points. All agree, however, that Ayutthaya was reduced to ashes and the population massacred.

Why, having won the city, did the Burmese destroy their prize? It has been suggested that they were enraged by the relentless resistance which the T'ais had shown', that they had a 'sacrilegious lust for destruction', and the 'blind rage of . . . barbarians'. The *Hmannan Yazawindawgyi* is dispassionate:

> In the midst of their enjoyment in celebration of the conquest . . . the commander-in-chief . . . [informed] his officers that news had been received that the Chinese Emperor had sent a vast army . . . to invade Burma; and that their brother generals and officers at the capital were distinguishing themselves and winning royal favour by successfully repelling the invasion . . . He added that as they had most successfully accomplished their mission by the capture of the Siamese capital . . . it behoved them to return as quickly as possible, after demolishing the city, moats, and all defensive and offensive works, as commanded by their Sovereign, so that they might be in time to take part in the fighting against the Chinese and share the honours of war in that field also.

Barely two months later the Burmese army had withdrawn. Only a token force was left behind to secure the countryside.



(Norman Plant)

A bronze head of the Buddha from Ayutthaya, now in an Australian collection.

Within six months of the Burmese Army's departure, Ayutthaya was 'liberated' by Phya Tak, one of five local 'strongmen' who laid claim to various vaguely delimited parts of the Ayutthayan kingdom on the collapse of central authority. Phya Tak . . .

> surveyed the ruins . . . became filled with pity, and meditated the rebuilding of the city, and placing it again upon its former basis . . . [but] one night he dreamed that the former sovereigns drove him away and would not allow

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him to remain. Early next morning the king related his dream for the information of his noblemen, and remarked: 'Noticing that the city has become an overgrown waste, it has been my wish to rebuild and resuscitate it, and place it upon its former prosperous footing. As the former owners of the city still jealously cling to it, let us mutually stimulate each other to build up the town Tonaburee [Thon Buri].' Having made known his dream and his determination, he gave orders to disband the army, gather together the people, the priests, and the descendants of the former royal families that remained. Heading these, he returned and located himself and them in the town Tonaburee . . . where the king constructed for himself a palace, adequate to the necessity of the times.

According to the *Hmannan Yazawindawgyi*, 106,100 families were taken from Ayutthaya to Burma. Luang Phraison Salarak contests this figure because 'even calculating the modest average of three persons to a family, the number . . . taken away would amount to 318,000 souls.' This is an incredible figure because the Thai version of the fall of Ayutthaya says two hundred thousand Thai lives were lost during the siege — the figure included those who were killed or died of disease and starvation. Salarak concludes that 'there could not possibly have been a very large population left in the city.' Further, the Thai Annals admit to only thirty thousand prisoners of war taken off to Burma.

This argument seems reasonable. During the siege, however, the population in the surrounding area, as well as armies raised in other parts of the kingdom, gathered at Ayutthaya. The population of the capital would have been abnormally large. How abnormally large is not known, but, since the *Hmannan Yazawindawgyi* bases its total on the apportioning of prisoners to each Burmese soldier according to rank, it is certain that a considerable number of Thais were at Ayutthaya.

It is probable that most prisoners of war put up valuables in their stead. Consider the problems involved in transporting several hundred thousand half-starved men, women and children from Ayutthaya to Burma — and that the Burmese army wanted to return home as quickly as was possible 'so that they might be in time to take part in the fighting against the Chinese'. The conquerors would have found ransom as attractive as the conquered.

When Phya Tak led 'the people, the priests, and the descendants of the former royal families that remained' to Thon Buri, he may have been at the head of a multitude. Ayutthaya may have been depopulated more by the decision to relocate the capital than by losses suffered from siege and captivity.

The Burmese dismantled the fortifications and may have fired Ayutthaya, but it seems that much remained usable. Substantial building materials — which are in scarce supply on a delta plain — were later loaded on barges and floated down-river to be rebuilt into facsimiles of the Ayutthaya structures from which they had come. Also, much booty must have stayed hidden from the Burmese, since 'treasure-farming' continued on a grand scale for at least fifteen years after the city was razed. A French Catholic missionary in the area at the time goes so far as to credit treasure-farming for the rapid recovery of the economy, remarking that 'the local Chinese . . . went through the ruins with a fine-toothed comb and recovered uncounted treasures from the debris and interiors of pagodas.'

Perhaps the destruction of Ayutthaya was as much a result of treasure-farming and the wholesale removal of building materials as it was a consequence of the Burmese siege.

Phya Tak is characterised as a 'man of destiny' whose faith in himself was such that 'he believed that even the forces of nature were under his control'.

Whatever this characterisation owes to the belated bestowing of attributes that might be expected in 'a worker of miracles', Phya Tak appears to have been well aware of his destiny should he attempt to 'rebuild and resuscitate' Ayutthaya. Not only would he have to contend with and probably bow to local vested interests — descendants of the royal family and the nobility whom he had antagonised when a general — but at Ayutthaya he was uncomfortably close to the stronghold of a much stronger rival in the person of the Governor of Phitsanulok, who had merely exalted himself in an area already accustomed to his authority.

Phya Tak's 'home' base was some distance from Ayutthaya along the east coast of the Gulf of Thailand — the present provinces of Chon Buri, Rayong and Chanthaburi. This area had not been attacked by the Burmese, and so was able to supply Phya Tak with both the men and materials he needed to overcome his rivals and restore the territorial limits of the Ayutthayan kingdom. Nothing less than the restoration of the kingdom, with himself as king, was Phya Tak's aim.

A reason frequently given for the decision to abandon Ayutthaya was the threat of famine. The land around the capital had gone untended during the siege. Relocating the capital did not solve this problem, however, for 'money was poured out without stint to obtain supplies [of rice] from abroad'.

Another reason often voiced is that 'to restore Ayut'ia would have cost a great deal of money'. Doubtless, but to build another city on the delta plain would have cost more.

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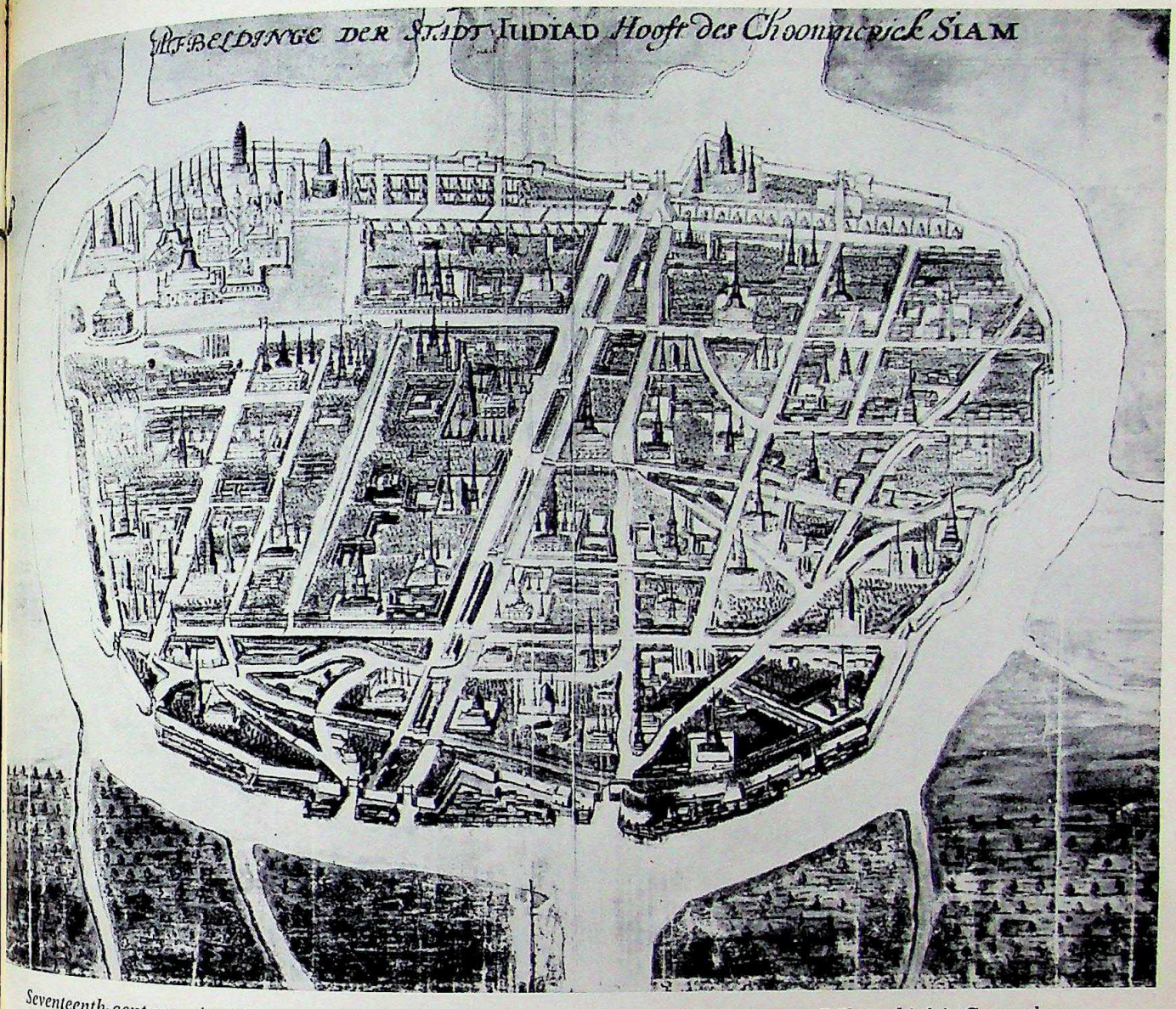

Seventeenth-century Ayutthaya, as depicted in an oil painting at the Algemeen Rijksarchief 's Gravenhage.

A third reason, closer to the mark, is that the defence of Ayutthaya 'would have needed a large army'. In fact, Phya Tak was interested more in offence than in defence — the liberation of Ayutthaya was an offensive operation, carried out perhaps to establish a just claim to the throne — but he did need a secure stronghold to which he could retire with impunity.

The Burmese were occupied with the Chinese who had invaded their homeland, but Phya Tak had four rivals for the kingship of all or parts of the former kingdom. Each of these rulers had greater resources at his disposal than did Phya Tak. Whatever sanguine hopes motivated Phya Tak, immediate considerations demanded that he retire to the most strategic position available, a defensible command post from which offensives could be directed. The fortress-town of Thon Buri, the strongest post guarding the approach to Ayutthaya by river and the system of canals that linked the Chao Phraya to its main distributaries, was more a prescription than a selection.

Nicolas Gervaise, writing of mid-seventeenth century Thailand (*Mémoires de Siam*, 1688), describes 'Bangkok' as 'the most important place in the kingdom of Siam, for it is the only one along all the coast which may offer any resistance to its enemies'. He adds that 'It is protected by walls only on the side facing the river which waters it on the *east* [my italics] and south.' Thon Buri, not Bangkok, is on the western bank of the Chao Phraya river.

The distinction between the two places is seldom drawn in the literature. Joost Schouten, manager of the Dutch factory at Ayutthaya in the 1630s, describes 'Banckock' as the head of a province and the most important place down-river from Ayutthaya. A Dutch picto-map dated from Schouten's time shows *'t Fortres Banckok* on the west bank of

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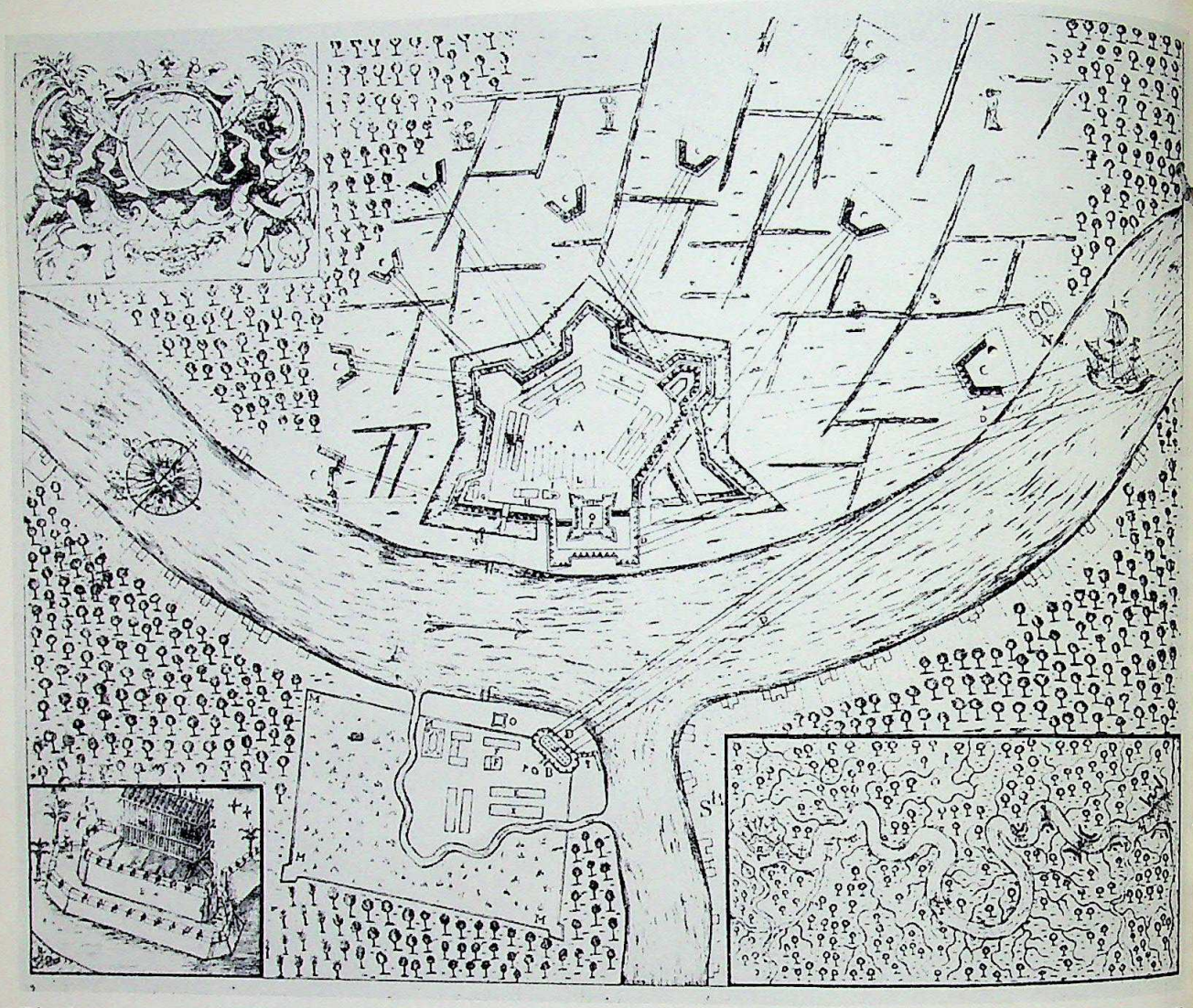

The fortress of Bangkok in 1688. (From Volant des Verquains' Histoire de la Révolution de Siam Arrivée l'An 1688. *published in Lille, France, in 1691.)*

the river, though the east bank is lined also by important looking buildings.

A fort on the east bank appears to have been built first in the 1660s to the design and under the supervision of Father Thomas, an Italian member of a French Jesuit missionary group that came to Ayutthaya in 1664. Both forts were reconstructed about ten years later by a French engineer seconded to the Crown in 1675.

In 1686 a distinguished French naval officer, the Chevalier de Forbin, was on loan to the Crown for a short time. He modernised the fortifications at Thon Buri and Bangkok and mounted the best European artillery on them as part of a general tightening of defences against the possibility of action by the Dutch to regain their former pre-eminent trading position in the kingdom.

Thai envoys were at the French Court in 1686 to invite French troops to come to the southern Thai town of Songkhla, where they could check the Dutch. The negotiations were successful, and a French force of 636 men and officers 'under General Desfarges' set sail for Thailand in 1687. Two plenipotentiary envoys accompanied the troops, and carried extraordinary instructions:

> It is His Majesty's Pleasure that . . . the King of Siam authorises the appointment of a French Governor at Bangkok, who shall be responsible to himself; also that he admits a French garrison to this town, and permits it to erect fortifications as a protection from the attacks of his neighbours and of the Dutch. Mergui is as vital for the trade of Siam with the Coromandel coast and other parts of India as is Bangkok for that of the Gulf of Siam and the China coast: the Envoys are therefore to request that a French garrison and Governor be posted there.

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There is no indication that the Envoys will encounter difficulty in regard to these demands which they make on His Siamese Majesty. Moreover, nothing could be worse than to have to apply pressure openly, since it would gravely prejudice the cause of Christianity, and would complicate the task of the trading Company. Nevertheless, if any change should have occurred in the sentiments of the King during the period that has passed... and if no hope remains of negotiating with success, in that event His Majesty is determined to force the entry into Bangkok...

The French were determined to exact the maximum price for their assistance. A foreign garrison at Bangkok could strangle the kingdom. The crisis that ensued is admirably described by Hutchinson in *Adventurers in Siam in the Seventeenth Century* (1940) and in *1688, Revolution in Siam* (1961). Fourteen months after its arrival 'the French garrison was forced to retire from Siam, leaving behind a feeling of hostility towards France in particular and towards Europeans in general which lasted for more than a century.' In fact, it was not until the ascension of the enlightened King Mongkut (Rama IV) in the mid-nineteenth century that the activities of Western diplomats, traders and missionaries were renewed in earnest. A number of eye-witness accounts of happenings in the kingdom at this time are available.

Events of the years in which we are particularly interested are not well documented, but we may safely assume that the condition of the trans-river forts at Bangkok had not improved with time. Dr. Engelbert Kaempfer, physician to the Dutch embassy to the Emperor of Japan, passed through the kingdom in 1690 and 'found the old Fort... in a bad condition; but the new Fort, that had been built by the French on the East shore... quite demolished' (*The History of Japan, Together with a Description of the Kingdom of Siam 1690-92*, Volume I, Glasgow 1906). About thirty years later, Captain Alexander Hamilton described the fort at 'Bangkok' as a regular tetragon that could mount 'about 80 great Guns... but no artillery is in it' (*A New Account of the East Indies*, Volume II, 57).

Despite its deterioration, the fortress of Thon Buri retained strategic pre-eminence in the area. Phya Taksin, now King Taksin, set out from Thon Buri in one direction and then in another and, in a remarkably short time and despite setbacks, overcame his more powerful rivals and restored the territorial limits of the kingdom of Ayutthaya. The kingdom, centred on Thon Buri, was restive but King Taksin sustained his hegemony and repulsed several incursions and full-scale invasions by the Burmese, who had been freed for further adventures by the achievement of peace with China in 1769.

By 1782, however, King Taksin had become incapable of governing, and he was replaced by his ablest general, Chao Phya Chakri. General Chakri was crowned King Rama Thibodi, and is known as Rama I or Phra Phuttha Yot Fa Chulalok, the founder of the present ruling dynasty.

In Burma, King Bodawpaya had seized the throne a month before the ascension of Rama I. Soon he began to prepare for a grand offensive against the Thai.

Rama I seems to have sought additional security from the Burmese by moving his citadel from the west to the east bank, thereby positioning his stronghold behind the westward bow of the Chao Phraya river. The river was, in effect, a ready-made moat, a quarter of a kilometre wide and nine fathoms deep; and the bow was easily 'strung' by a canal.

It has been suggested that King Taksin had planned to establish his citadel on the east bank of the Chao Phraya river from the outset, and that construction, or at least the planning for building, had been under way for some time before the move by Rama I.

There is no conclusive evidence for this view, but the circumstantial evidence is persuasive. First, east of the river stretched the vast, swampy 'Sea of Mud' that had to be drained before construction could begin. Second, the site chosen for the new palace was already occupied by a rich Chinese merchant who, together with a considerable community of Chinese, was invited to move to an uninhabited area immediately beyond the walls of the new citadel. Third, King Taksin's 'palace' west of the river seems to have been a temporary residence, as it lay next to two much-frequented monasteries that were adjacent to busy markets — not the remote site that might be anticipated for a royal palace, in view of the nature of the monarchy. Fourth, piles had to be driven into the waterlogged site to support even a paltry building, which the palaces and the residences of the nobility were not. Fifth, Bangkok was planned meticulously in the image of Ayutthaya, the layout of the city and the form of the principal structures being intended to correspond as closely as possible to Ayutthayan prototypes.

All this strongly suggests that much of the groundwork, if not actual construction, had been accomplished, or at least carefully considered, before Rama I announced his intention to establish his citadel east of the river.

It might be suggested also that King Taksin had thought to return to Ayutthaya when he had a firm grip on the kingdom but that he later decided, in effect, to move Ayutthaya to Bangkok. Perhaps King

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Taksin had the prescience to realise that, as Ayutthaya was fast becoming inaccessible to overseas shipping, another port would have to be developed; since this would, necessarily, dissociate the commercial and political affairs of the State, it could lead to fragmentation of the kingdom or to re-location of the capital in future.

Van der Heide argues that Thailand was neither an exporter nor an importer of any importance before the mid-nineteenth century ('The Economical Development of Siam During the Last Half Century', *Journal of the Siam Society*, 1906). He says:

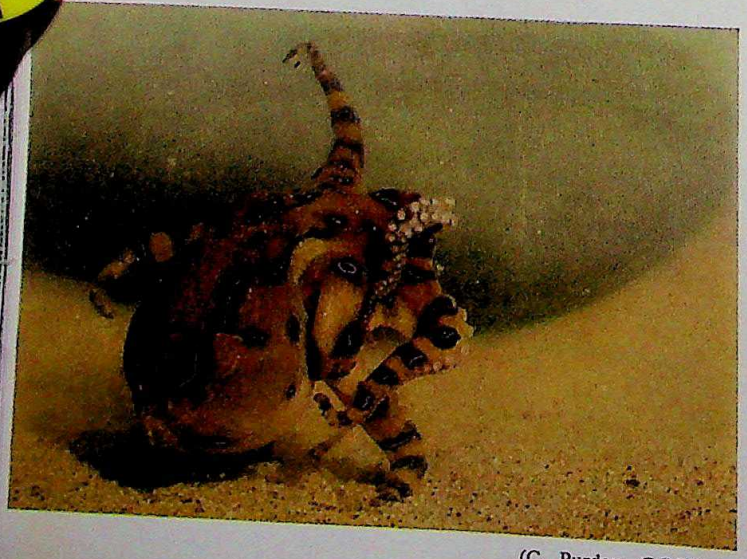
> Only luxuries and very valuable and little bulky commodities . . . were the usual articles of trade at these times, before modern transportation . . . [enabled] bulky stock to enter . . . trade with the East. As Siam . . . did not produce to any considerable amount such [goods] . . . the trade . . . could not become important . . . [or] profitable.

Judged by European standards of the day, Thai trade before the mid-nineteenth century would seem negligible, but that this trade was of importance in its day is reflected in the number of European and Asian trading houses at Ayutthaya.

Joost Schouten enthuses that 'in the chief City [Ayutthaya] the trading is very good', and he lists a number of exotic exports. 'They drive a great trade with all eating provisions, especially Rice, many thousand Tuns being transported yearly by Foraigners.' It appears that 'bulky stock' entered Thai trade before the advent of modern means of transport. 'The King himself . . . hath his own Ships and Factours trading to Choromandel and China . . . he likewise trafficks to Pegu, Ava, Jongonna, Langjang, and other places.'

Even when a flourishing centre, however, Ayutthaya was difficult to reach. In addition to the extensive mud flats and the bar across the mouth of the Chao Phraya river, which denied entry to ships drawing more than four and a half metres of water, and the tortuous fairway of the meandering river, the water became shallow a little way above Bangkok, and ships drawing three and a half metres of water were 'scarce able to mount to the City of Iudia [Ayutthaya], where they [were] sometimes forced to stay till . . . *September, October* and *November*, for water to return.'

To a mid-nineteenth century observer, familiar with the ships of his day, 'The water of the Menam [Chao Phraya river] off Yuthia [Ayutthaya] . . . [was] a great deal shallower than . . . at Bangkok, and only vessels of a small tonnage could ever have been able to reach [it].'



(C. Purday, C.S.I.R.O.)
A blue ringed octopus.

(Theo W. Bro...)
A stone fish, more visible than usual.

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In any event, Rama I did not formally name the new capital on the east bank of the Chao Phraya river until 1786, and four years seem to have been adequate to have laid down the lineaments of a city given the large force of labour (much of which was 'recruited' from Cambodia and Laos) at the king's disposal.

The royal palaces and the great houses of the paramount dignitaries were built of wood at first and though inhabited very soon after the move across the river, construction continued on these and other buildings for at least three years. Bricks were brought down-river from Ayutthaya and across the river from Thon Buri for use in the fortifications and later, the principal structures.

It seems that the fortifications at Thon Buri were partially dismantled because Rama I, when a general, had experienced the difficulties involved in defending a city built on both sides of a river.

Work continued on essential structures throughout the reign, which ended in 1809. Canals were dug around and through the city, both for defence and for drainage. The walls of the city and the citadel were constructed and fortified and were constantly being strengthened. A large number of important and imposing monasteries were constructed and consecrated.

Seventy-five years after the founding of the new capital, it was remarked that 'The general outlines of the old city [Ayutthaya] so closely resemble those of Bangkok, that the map of the one might easily be mistaken for the representation of the other.'

The honours, of course, belong to Ayutthaya, the rubble of which was embedded in the palaces, monasteries and fortifications of Bangkok which were built in the likeness and carried the names of their splendid prototypes.

Rama I did not wish to create a wholly new city but to re-create Ayutthaya, to reproduce the form of the old capital as an essential part of his wish to restore the whole of the Ayutthayan way of life.

[1] Translated by Luang Phraison Salarak in 'Intercourse between Burma and Siam as Recorded in Hmannan Yaza-windawgyi', *Journal of the Siam Society*, Vol. XII, Part II. 1918.

[2] Mr. J. J. Boeles discovered this document at the Arsip Nasional in Jakarta. He has transcribed the old Dutch and translated it in 'Note on an Eye-Witness Account in Dutch of the Destruction of Ayudhya in 1767', *Journal of the Siam Society*, Vol. LVI, Part I, 1968.

[3] Translated in the 'History of Siam' in Pinkerton's *Voyages and Travels, Vol. IX*, London 1811.

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DANGER!

Theo W. Brown

EXTENDING for more than twenty thousand kilometres, Australia's coastal fringe supports a marine environment unequalled anywhere. In the northern tropical regions, particularly along the east coast, there is an infinite variety of marine life. The clear waters of the Great Barrier Reef are ablaze with kaleidoscopic colour and movement.

But wherever man intrudes under water, he is under constant threat of an agonising, perhaps fatal, encounter with the dangerous marine animals that inhabit the sea. Australia's inshore coastal regions have been richly endowed with them.

Marine life which is a hazard to man includes animals that have venomous, poisonous and dangerous characteristics.

The creatures most widely recognised as dangerous are the ancient and primitive Elasmobranchs which include man-eating sharks and venomous sting-rays. The dangerous species of shark have a well-earned reputation and need no further introduction.

However, many of the apparently 'harmless' species of shark are a threat to the uninitiated. The carpet shark or common wobbegong, which lives among rocky and coral reefs around the continent, can inflict a nasty bite when provoked. This normally docile creature spends much of its time in rocky

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A venomous sea snake.

A blue-spotted reef ray in a coral cave.

caves and coral caverns, but when molested or disturbed by an inquisitive diver or spearfisherman it swiftly retaliates to protect its life or habitat.

Other small sharks adopt a defensive *rôle* when threatened, but if left alone they are no danger to a diver.

The close relative of the shark, the ray, occurs in a number of species capable of inflicting serious, and occasionally fatal, injuries on the unwary. Rays are armed with venomous barbs on their whip-like tail appendage.

Although sting-rays are extremely timid and difficult to approach under water, many lie completely or partially buried in the sand, often with only the eyes visible. In shallow waters they are particularly dangerous, for they may be trodden on by an unsuspecting wader or swimmer. The animal retaliates by whipping its tail back over its body.

One or more venomous barbs or spines — depending on the species — may inflict painful wounds. Fatalities have occurred. I have on record a case where a boy dived into shallow water and, apparently, landed on a concealed sting-ray; he was fatally barbed in the chest.

Although the danger from sharks and rays is universally known, many other marine animals that pose a threat to human safety or life pass almost unnoticed.

So far, twenty-five species of sea snake have been recorded in Australian waters. Although they inhabit tropical regions, they are occasionally seen in southern latitudes during summer, and sighting reports have come from as far south as Victoria. All sea snakes are highly venomous, but relatively few fatalities have occurred. Research has shown that they are usually timid and will attack only under severe provocation.

Some species, however, are very curious. When I was diving in the Gulf of Papua, at the northernmost limits of the Great Barrier Reef, an inquisitive snake wrapped itself around my underwater camera housing, proving that I had ventured too close.

On two occasions in the past twenty-three years I have had cause to fear sea snakes. Both incidents occurred during research in New Guinea waters. It appears that a chemical attractor, unknown to me at the time, aggravated the snake and caused it to attack. The result was a number of fang marks in my rubber flippers as I beat a hasty retreat.

The fangs of a sea snake are usually smaller than those of land snakes, but are still large enough to inflict a fatal bite. One species, *Hydrophis belcheri*, is thought to produce the most potent snake venom in the world.

A number of marine molluscs are harmful to man, and some inject a lethal toxin. Among these animals is the well known blue-ringed octopus.

Although not aggressive, the species has earned a bad reputation around Australia after a number of fatalities. Two closely related species appear to be involved, one being found in the more temperate waters *(Octopus maculosus)*, and the other in tropical regions *(Octopus rugosus)*.

The blue-ringed octopus is extremely dangerous when molested and has a venomous bite. The animal has brilliant blue circular markings on its body and tentacles when under threat, and this has given it its common name. Its small size and

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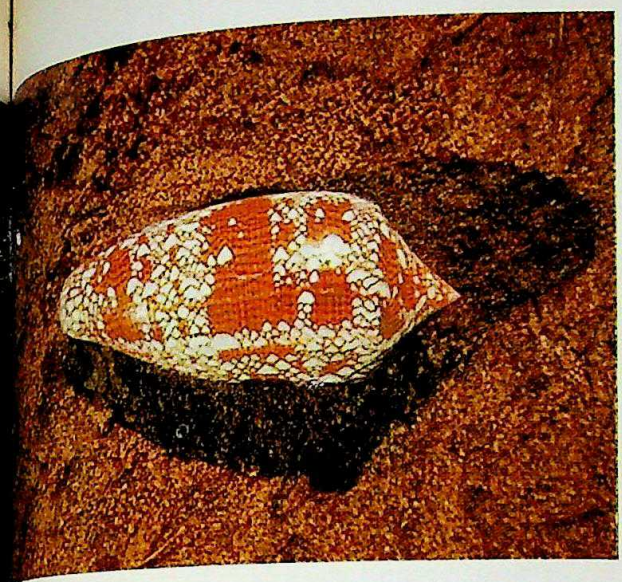

A textile cone shell.

A crown of thorns starfish. (Photos by Theo W. Brown)

...ctive appearance, together with its habitat of ...y tidal pools and other close inshore areas, ...e it particularly dangerous to children.

...topi are just a small part of the giant family ...molluscs — which includes a bewildering array ...shellfish — limpets, periwinkles, the beautiful ...ries, whelks, clams, cones, mitres and turban ..., to mention just a few. Some of the cone ...s are particularly dangerous, for they eject a ...mous barb when handled.

...eir attractive appearance makes them easily ...on tropical reefs, but they are dangerous if ...essly handled.

...ecent work by Dr. Robert Endean and his ...ciates at the University of Queensland suggests ...only the venom of the fish-eating species of ...s is of real importance. The most dangerous ...shells are *Conus geographus, C. catus, C. tulipa, C. striatus.* The much feared textile cone ...us *textile)* is apparently not as dangerous as it ...once reputed to be.

...e venom apparatus of the carnivorous cone ...sts of a bulb from which it ejects a radula ...h long and hollow, with barbed ends. The ...h lies in a pool of venom before being injected ...the victim in the manner of a harpoon. A ...ber of people have been partially paralysed, or ...died after such attacks.

...me members of Echinodermata, such as sea ...ns and the crown of thorns starfish *(Acanthaster ...si),* inflict painful wounds with their spines. The ...n of thorns starfish is the only known venomous ...rchid, and its upper surface is covered with long ...es. The common needle-spined sea urchin *(Diadema setosum)* and a number of other urchins cause wounds if trodden upon or carelessly handled.

Their spines easily penetrate gloves or rubber swim flippers, and their friable nature makes them extremely difficult to remove from a wound. The spines shatter into numerous small segments in the flesh. From personal experience, I can testify that such injuries result in severe pain and secondary complications — swelling, vomiting, and faintness.

The venomous scorpion fishes are well named, for in spite of the small size of some of them, all can inflict painful wounds. The venom is usually delivered through a series of needle-sharp head and dorsal spines, which vary in number according to the species. The protective colouring of many of these fish and their habit of remaining motionless when approached make them a particular hazard. Some scorpion fishes are so well camouflaged that it is difficult to distinguish them from their surroundings, and I have often moved to within a few inches of a specimen before detecting it.

One of the better known scorpion fish, widely distributed in Australian waters, is the beautiful and fragile butterfly cod *(Pterois volitans).* This animal is also called the zebra or fire fish, and its long, needle-sharp dorsal spines can inflict a very painful wound.

A close relative, the repulsive stone fish, is commonly found on tropical reefs, although one species has been recorded as far south as southern Queensland. The habitat of the stone fish includes coral reefs, muddy bays and estuaries along the mainland. It is a special menace because it remains motionless in very shallow water, among coral rubble, or almost completely buried in mud or sand

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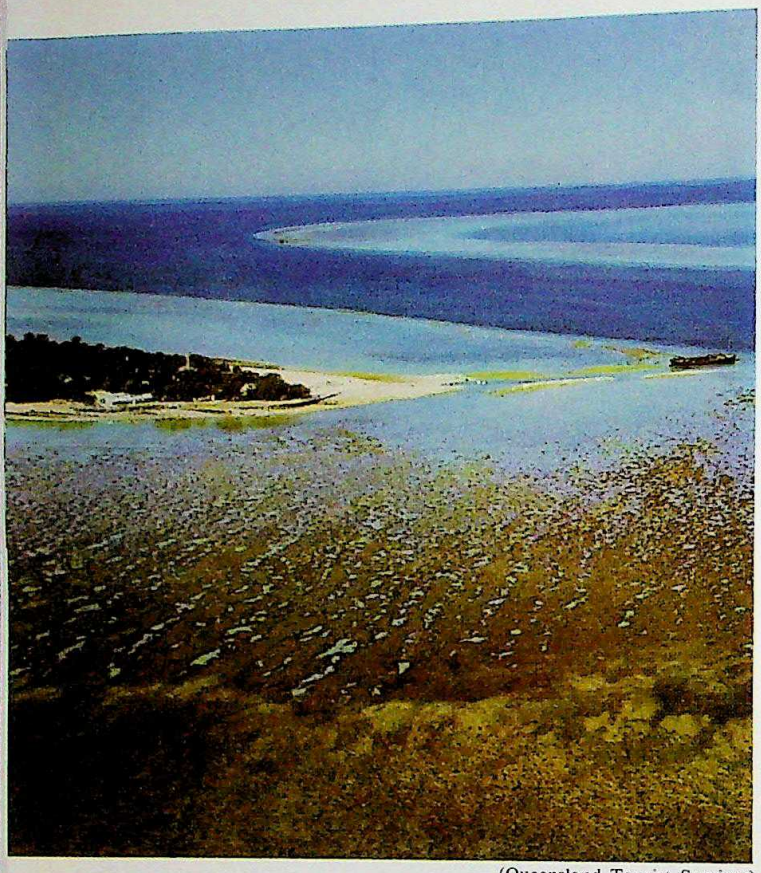

(Queensland Tourist Services)

Part of the Great Barrier Reef at Heron Island is shown above. At right is feather coral, one of more than three hundred varieties on the reef, with colours ranging from delicate pink to deep purple.

where it is virtually impossible to see. Once, while searching for marine specimens under small pieces of rubble on tidal reef flats, I almost picked up a stone fish with my bare hand.

Two species of stone fish are common in Queensland waters *(Synanceja horrida* — sometimes *S. trachynis* — and *Synanceja verrucosa);* both have thirteen venom-producing dorsal spines capable of penetrating rubber-soled shoes or sandals. As the victim treads on the stone fish and the spines enter the flesh, pressure on the skin surrounding the spines causes venom to be injected into the wound, in the manner of a hypodermic syringe. There immediately follows excruciating pain. Fatalities have been recorded, although only rarely.

The habitat of this fish, and its perfect camouflage and inactive behaviour when approached, make it one of the greatest hazards to people walking on tidal reef flats without protective footwear.

Spinefeet or rabbit fishes are often disturbed by reef fossickers. Their shoals scatter across the reef flat, and the fish seek shelter wherever they can — under corals, in weed patches or even against the wader's feet. Two species, the golden-lined spinefoot *(Siganus lineatus)* and the black spinefoot *(S. rivulatus),* have numerous spines capable of inflicting stings, and the venom injected by a deep puncture leads to immediate and intense pain. There is dark discoloration around the wound.

Fishermen must take care when handling many edible fish, for some species have strong dorsal spines that can cause painful injuries. The butterfish *(Selenotoca multifasciata)* and spotted butterfish *(Scatophagus argus)* are good examples.

Painful wounds can be caused by flathead and surgeon fishes, though they are not necessarily venomous. The surgeon fish are well named, for two razor-sharp, scalpel-like spines are located on each side of the body, close to the tail.

Worth mention are the ichthyocrinotoxic fishes — those poisonous when eaten by man. Perhaps the best known of these is the small toad or puffer fish, which is common around the Australian coast.

When caught or under attack, this fish gulps in water and air and inflates itself into a grotesque balloon. The flesh is highly poisonous, and a number of unknowing people have died from eating it.

The tropical puffer fish *(Diodon hystrix),* more commonly known as the porcupine fish, grows much larger, and I have recorded specimens in excess of three kilograms in weight. These large fish often laze in caves and coral caverns. They are easy prey for spearfishermen, for they appear unafraid of divers.

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...ese portions of puffer fish can be eaten without ...effect. In Japan, specially trained and govern... ...licensed cooks prepare these non-toxic delica... ...which are said to be a gourmet's delight. But ...preparation is a highly skilled art, for the large ...ber of fatalities involving puffer fish poisoning ...ates the danger.

...The so-called ciguatoxic fishes can cause serious ...poisoning, or ciguatera, in humans. A wide ...ety of tropical reef fish are regarded as being ...toxic, and those in Australian waters include ...Lutjanus nematophorus*, the paddle-tail or red ...per (*Lutjanus gibbus*), and the red bass (*Lut... ...coatesi*). A species of mackerel has also been ...icated in ciguatera poisoning.

...Toxicity is said to vary during the year. When ...flesh is eaten, it can cause a wide range of ...ressing and unpleasant symptoms that may last ...days or several weeks — even for months, in ...e serious poisoning cases. Although rarely fatal, ...uatera poisoning is thought to have caused one or ...deaths in Australia.

...Other marine animals associated with food poison... ...include some species of crab, turtle, clams and ...er shellfish. One should be guided by local ...wledge before eating any unfamiliar marine pro...

...But the coelenterates (hydroids, corals, anemones ...jellyfish) are the greatest threat to life and ...ury. Although some of the venomous marine ...mals forming part of this family are well known, ...ers are only rarely encountered. All coelenterates ...e one common and distinguishing feature — they ...ess batteries of threads or stinging cells called ...matocysts.

...The nematocysts are mainly in the tentacles, and ...a mechanism for defence and food capture. ...re are three types of nematocysts, but the ...etrants' or 'injectors' — these being frequently ...ed with barbs or spines — concern man. On ...charge, the thread penetrates the tissue of the ...m and injects a toxic protein. The stings — ...ted unwittingly on the part of these animals — ...in intensity of effect from a mild irritation to a ...en, agonising and violent death.

...The coelenterate is the hydro-coralline *Millepora*, ...so called stinging or fire coral, which is often ...aken for a coral because of its solid calcareous ...eton. The nematocysts of *Millepora* produce ...vere burning or stinging sensation — hence the ...mon name. During the 1950s, on my first dive ...a tropical reef, I broke off what I thought was ...attractive piece of coral. It was, in fact, *Mille...*. For several hours afterwards I had an un...ant burning sensation in my fingers, which ...ained blotched and red for several days.

Other stinging hydroids look like delicate and elegant ferns, and have been called fire weed. One particularly attractive hydroid, *Aglaophenia cupressina,* is common on coral reefs.

The hell's fire anemone or stinging anemone *(Actinodendron plumosum)* resembles a small Christmas tree growing from the sand. This animal is also often mistaken for a plant, with disastrous consequences. It can inflict an extremely painful sting, whose effects may last more than a week.

The hydrozoan *Physalia,* the Portuguese man-of-war or bluebottle, is widely distributed in Australian waters, and is easily recognised by its prominent 'sail' or inflated gas-filled float or bladder which supports the colony — the assortment of tentacles. The common name bluebottle originated in Australia because of the intense blue colour of the jellyfish. The tentacles vary in length and have been recorded in excess of 9.2 metres. Vast numbers of the common bluebottle *Physalia utriculus* sometimes invade the beaches around Australia when driven ashore by wind, and many swimmers fall victim to their painful stings.

But it is the 'true' jellyfish, the Carybdeida or Cubomedusae (the box jellyfish), that pose the greatest threat. These animals inhabit the warm, shallow tropical seas, and prefer sheltered sandy coves and bays. Because of their severe stings, they are often referred to as sea wasps.

In these jellyfish, the bells are distinctly cuboid or quadrangular in shape, with four sides that tend to be flattened, and from each corner trails either a single tentacle or a group of tentacles, all armed with formidable batteries of stinging cells. They are strong swimmers, and although the tentacles are usually a light mauve in colour, the jellyfish is highly transparent and extremely difficult to see in the water. A swimmer can be stung without having been aware of the animal's presence.

The small Carbydeid medusa, commonly known as irukandji in north Queensland waters, has four tentacles and does not inflict fatal injuries. Contact with this jellyfish can be mildly painful at first, and secondary symptoms of severe backache, chest and abdominal pains, and vomiting follow.

The larger box jellyfish, *Chiropsalmus quadrigatus* and the more dangerous *Chironex fleckeri,* have earned an evil reputation in north Australian waters. Many fatalities and serious injuries have been attributed to *Chironex fleckeri,* which has been recorded with a bell in excess of twenty-three centimetres in diameter, and with tentacles over six metres long. The jellyfish may have up to sixteen tentacles from each group of claws on the four pedalia, so that the animal can have up to sixty-four separate

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tentacles. Its close relative, *Chiropsalmus quadrigatus*, which at first glance appears identical, does not attain the same size and is not considered as dangerous.

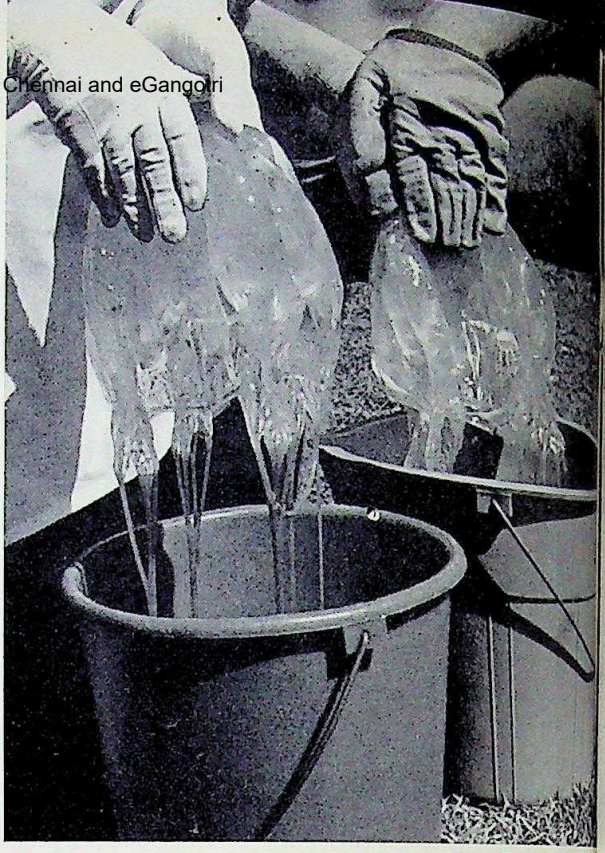
I first became involved in research with the lethal box jellyfish in 1969. A boy came to me with multiple interlacing weals over his neck and arm, and complained that he had been stung by a jellyfish. Although I was well aware of the hazards of the jellyfish during the summer months from October to April, the area had always been considered safe from the lethal species.

I began netting operations and gathered twenty-seven *Chironex fleckeri*, together with a number of other less dangerous jellyfish. The following summer, 1970/71, I captured fifteen *C. fleckeri*. During the summer of 1971/72, a further fifty-three were gathered, and last summer, between December 1972 and April 1973, a total of two hundred and seventy-six *C. fleckeri*, as well as a large number of other jellyfish, were captured.

Complete protection from lethal jellyfish sting is ensured only when all parts of the body are covered with light-weight, close-fitting swimming apparel. The need for protective measures becomes apparent when one considers that during the New Year period in one region half-way up the Queensland coast two of Dr. Robert Endean's staff gathered about a thousand large specimens of *C. fleckeri* with only four hauls of a six hundred-foot net. Dr. Endean said at the time that a person not wearing protective clothing would not have left the water alive.

Little is known of the early life cycle and development stages of the box jellyfish. Its habitat in in-shore coastal regions makes it a serious hazard to human life, for during summer the animal is likely to be found in the quiet shallow waters of any sandy beach along the northern tropical coast. Large numbers of jellyfish lie with tentacles fully extended in search of the small fish and prawns on which they feed, often in only a few inches of water at the very edge of the beach. In these circumstances, many of the tragedies involving the box jellyfish have occurred.

It should be remembered, however, that dangerous marine animals play an important role in and are an integral part of the marine ecosystem. They should never be slaughtered indiscriminately, for when injuries or fatalities occur, it is man who has initiated the sequence of events. The vast majority of these

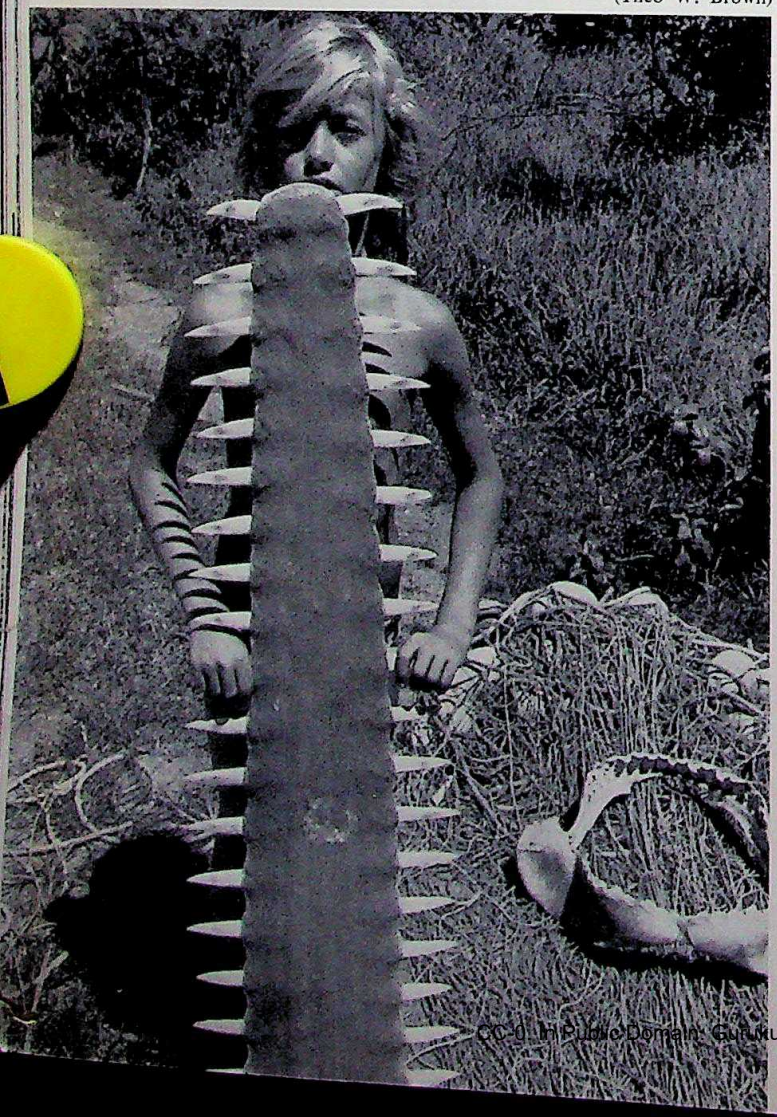


(Theo W. Brown)

Box jellyfish (Chironex fleckeri). *The one at left had a bell twenty-one centimetres across; fully extended, the tentacles covered six metres.*

A saw-like appendage from a sword fish.

(Theo W. Brown)



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...als employ their defensive mechanism only as ...st resort and in a desperate bid to survive. Man-...ing sharks attack without provocation, but rarely ...other marine animals.

The wise visitor to the sea-shore and the under-...er domain always seeks local advice on possible ...gers. Ignorance, indifference or neglect of danger accounts for most of the injuries or fatalities man suffers from the animals of the sea.

THE AUTHOR: *Theo W. Brown is a research associate of the Medical Oceanographic Branch of the Institute of Medical Research of French Polynesia, the World Life Research Institute of Colton, California, and the School of Biological Sciences of the University of Sydney.*

HYACINTH

My sisters drowsed among the flowers
drunk with longing, drunk with love,
in their familiar mental moonlight,
dreaming fulfilment, fingers tearing
hymens of unopened buds.

The God came in his car
daily, snatched me away.
My sisters waited, silenced
by his appalling wealth.
Their pale flesh sickened him.
He scorned their gaping rapture.
We left them fluttering
hysterical white hands.

Life had no images
but those fixed in his eye.
We burned along the highways
in his outlandish car.
Earth, a pastoral dream;
Sea, membranes of colour.
Far off, the tarnished cities
glittered with abstract light.
Somehow our bodies solved
all physical equations,
keeping his pulsebeat hours.

Today I took the wheel
drunk with violence, drunk with love
Down, down through private horror
the bright disc spun towards me
matter and colour fused
the world in one explosion.

My head lolls on its stalk.
My sisters kneel beside me
stroking my hair and screaming
at the darkness on their fingers.

—Gwen Harwood

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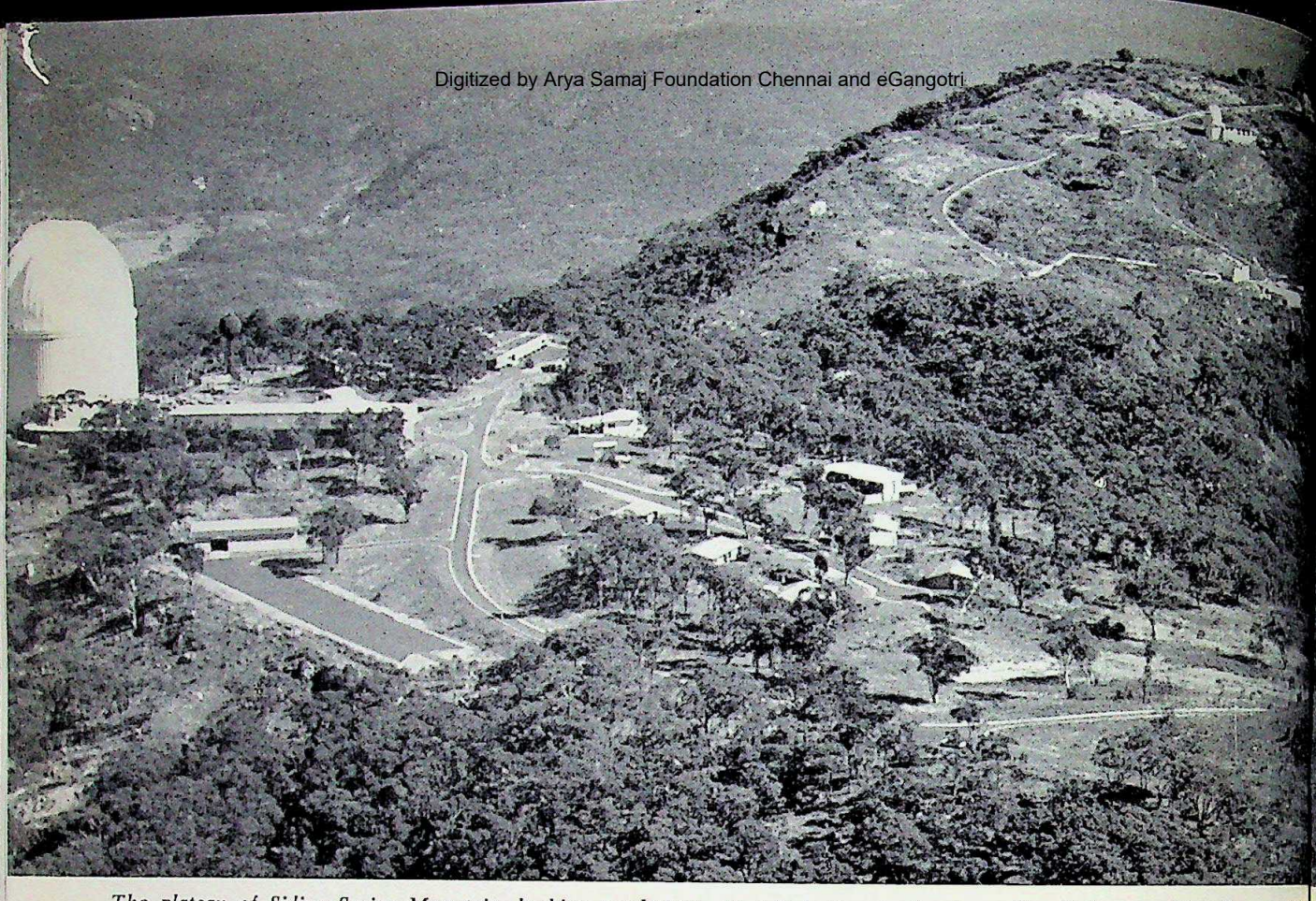

The plateau of Siding Spring Mountain, looking north-west. At left is the Anglo-Australian Telescope Board's new 391-centimetre instrument. In the right foreground is a British installation, the Science Research Council's Schmidt 120-centimetre telescope. The Australian National University's 60- 40- and 100-centimetre telescopes are in the centre at rear, and in the foreground are support staff houses and workshops, and astronomers' quarters. Above the 391-centimetre telescope dome is part of Warrumbungle National Park.

NO LIMITS TO THE

EARLIER this year, a group of astronomers at two Australian observatories (Mount Stromlo and Siding Spring) found evidence of what are called for convenience 'black holes'. More recently, a United States astronomer said he had found evidence of still another 'black hole', this one in the Cygnus galaxy. 'Black holes' were predicted a long time ago by Einstein's relativity theory. The author of this article, one of four astronomers in the Australian team (the others are Dr. N. V. Vidal, Dr. D. T. Wickramasinghe and Dr. B. A. Peterson) says 'black holes' are 'the most bizarre of the ultimate states of stars.' Once larger than twenty times the size of the sun, they have shrunk to literally nothing. They are called 'black holes' because the gravity attraction exerted as far away as five kilometres from the spot where the star 'was' is strong enough to swallow anything within that range. Even light as close as this to the 'black hole' would be bent back and would never get away.

Dr. Bessell adds that any matter falling on to the 'black hole' would be heated to temperatures of more than ten million degrees Celsius: then it would emit X-rays, which are clues for finding out that these 'collapsed objects' exist.

Experiments in Australia and elsewhere detected X-rays from sources beyond the solar system about ten years ago.

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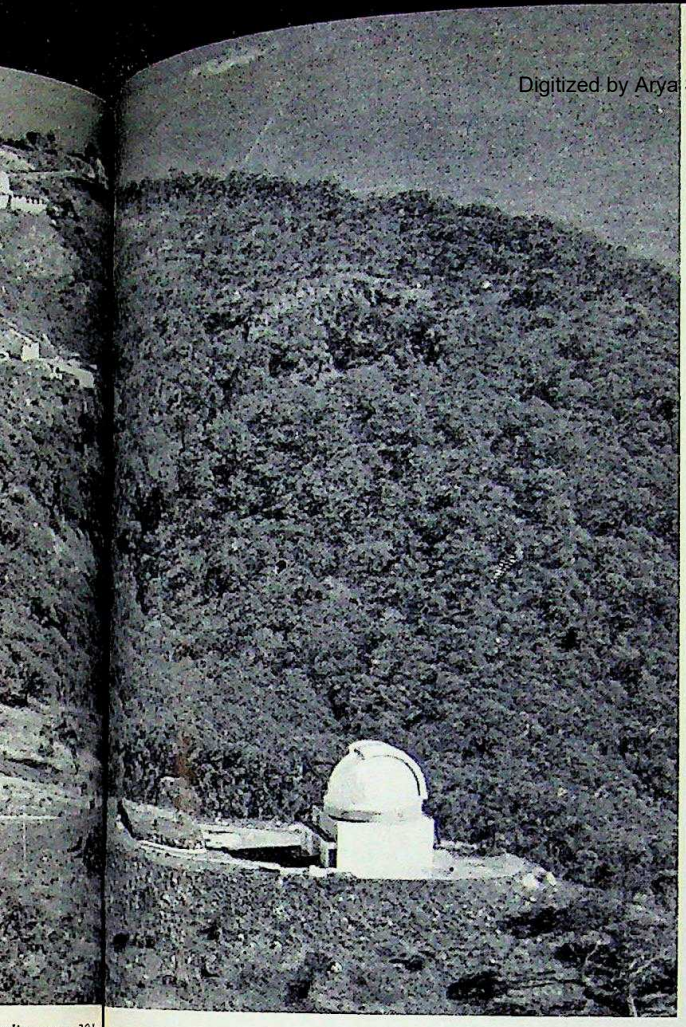

rd's new 391-
Schmidt 120-
entre at rear,
91-centimetre

The Crab Nebula, the remnant of a star which exploded in A.D. 1054. Its energy source is a neutron star, spinning rapidly and generating X-ray, radio and visible light pulses.

THE IMITLESS

Michael Bessell

MODERN astronomy is in the middle of one of its most exciting and vital periods. Unex-ted discoveries made during the last decade have ulated research in all related aspects of mathe-ics and science and captured the imagination of general public.

Governments are funding new telescopes and pment, and all Australian universities now have nding astronomy sections. The Apollo pro-me in the U.S.A. encouraged engineers and icists into astronomy and they brought with new techniques and expanding areas of interest. oretical aspects of astronomy were greatly ed by the advent of large high speed computers, the integration of computer and TV techniques bservational astronomy promises exciting deve-ents in the next few years.

Three developments during the last decade shook astronomy: they were the discovery of X-rays coming from outside the solar system, of quasars, and of pulsars. These apparently unrelated discoveries shattered the calm view of the Universe revealed over the past centuries; instead, they highlighted the rapid and violent changes that take place.

Astronomers at the Mount Stromlo and Siding Spring Observatories in Australia have made major contributions in these new fields in co-operation with physicists and astronomers from other Australian institutions.

The headquarters of the Observatory are on Mount Stromlo, near Canberra, where the 190-centimetre reflector is located. Originally the Commonwealth Observatory, it is now one of the major world optical observatories.

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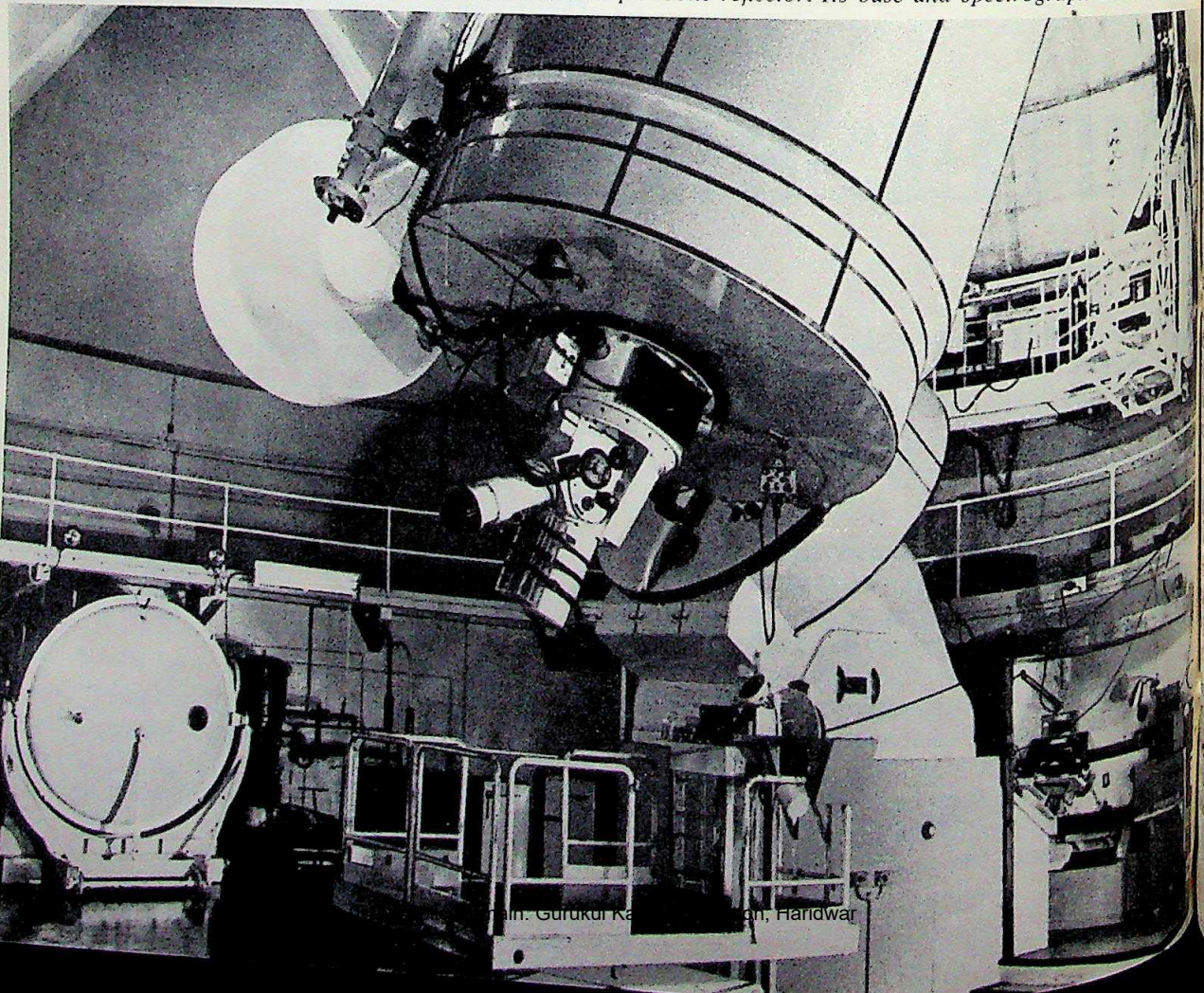
The Eta Carina Nebula in the southern skies contains some of the youngest and brightest stars in the galaxy.

The Large Magellanic Clou

The biggest instrument on Mount Stromlo is a 190-centimetre parabolic reflector. Its base and spectrograph are shown here



...ain: Gurukul Ka... ...on, Haridwar

The Small Magellanic Cloud, the galaxies nearest to the Milky Way; investigation of these galaxies is a prime reason for building a large telescope in the southern hemisphere.

A search for darker and better skies than Canberra's led to Siding Spring mountain, near Coonabarabran in New South Wales, where since 1964 the 65- and 40-centimetre telescopes have been built and operated. Dominating the mountain range now, however, is the Anglo-Australian Telescope Board's 391-centimetre reflecting telescope.

Scheduled for completion late next year, this telescope will be used by Australian and British astronomers. With four times the light-gathering power of the Mount Stromlo 190-centimetre telescope and with specially designed optics, this new telescope should enable astronomers to obtain much more information on very faint objects.

The optical astronomer's contribution to the new study of X-ray sources, quasars and pulsars is twofold. It lies first in the identification of a visible object or 'star' which is either producing the strong radio frequency (or X-radiation), or is associated with the object that is; and secondly in the analysis of the light of the visible 'star' to determine the distance, brightness, composition and perhaps mass of the object of interest. This information enables the object to be discussed within the framework of what we already know about evolving stars, galaxies and the Universe.

Extra-solar X-ray astronomy was born on June 18, 1962, when X-rays from the direction of the constellation Scorpius were discovered by a group of United States astronomers from a rocket payload launched from White Sands Missile Range. (Detection of X-rays must be done above the atmosphere because the atmospheric gases absorb X-rays of all energies.)

Many physicists then began experimenting, among them scientists from the Universities of Adelaide and Tasmania, who sent up high altitude balloons from Mildura, Victoria, and rocket flights from Woomera, South Australia.

The increasing sensitivity of later experiments led to the discovery of many new sources, among them the Crab Nebula, which is the supernova remnant of a star whose explosion was recorded by the Chinese in A.D. 1054. Refined location techniques also enabled the first source, Sco X-1, to be identified with a peculiar faint blue star. But, apart from a few other old supernova remnants which were also radio sources, and Cyg X-2, which was similar to Sco X-1, none of the fifty or so X-ray sources known by 1970 were identified.

Then, in December 1970, from San Marcos Island off the coast of Kenya, the first X-ray satellite,

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Uhuru (the Swahili word for 'freedom') was launched. The remarkable data collected by this satellite have located about seventy-five new sources, some in the neighbouring galaxies, the Large and Small Magellanic Clouds. It has also been determined that many of the strong X-ray sources are going on and off regularly, apparently because of a companion star passing between the source and the detector.

In 1971 radio astronomers found a faint radio source near the position of a constant X-ray source, Cyg X-1. Their most accurate position enabled optical astronomers to pin-point a sixth magnitude star, whose spectrum showed that it was orbiting around an invisible companion every 5.6 days. The mass of the invisible companion was determined to be at least four times that of the sun, and the X-rays were probably coming from it.

The doubt concerning this identification was quickly dispelled by the identification of one of the eclipsing X-ray sources by astronomers at Mount Stromlo and in the United States, independently. They found another bright star of seventh magnitude with exactly the same orbital period as the eclipsing X-ray object. The Australian National University scientists at Mount Stromlo established that the unseen companion in this case was the source of the X-rays, and its mass also was about three times the mass of the sun. Since then another eclipsing source has been identified as a star of similar mass.

The big questions posed were how the X-rays were produced, and what these massive objects were if not normal stars. The suggested answer, 'They could be black holes', has caught the public interest and created controversy in physics.

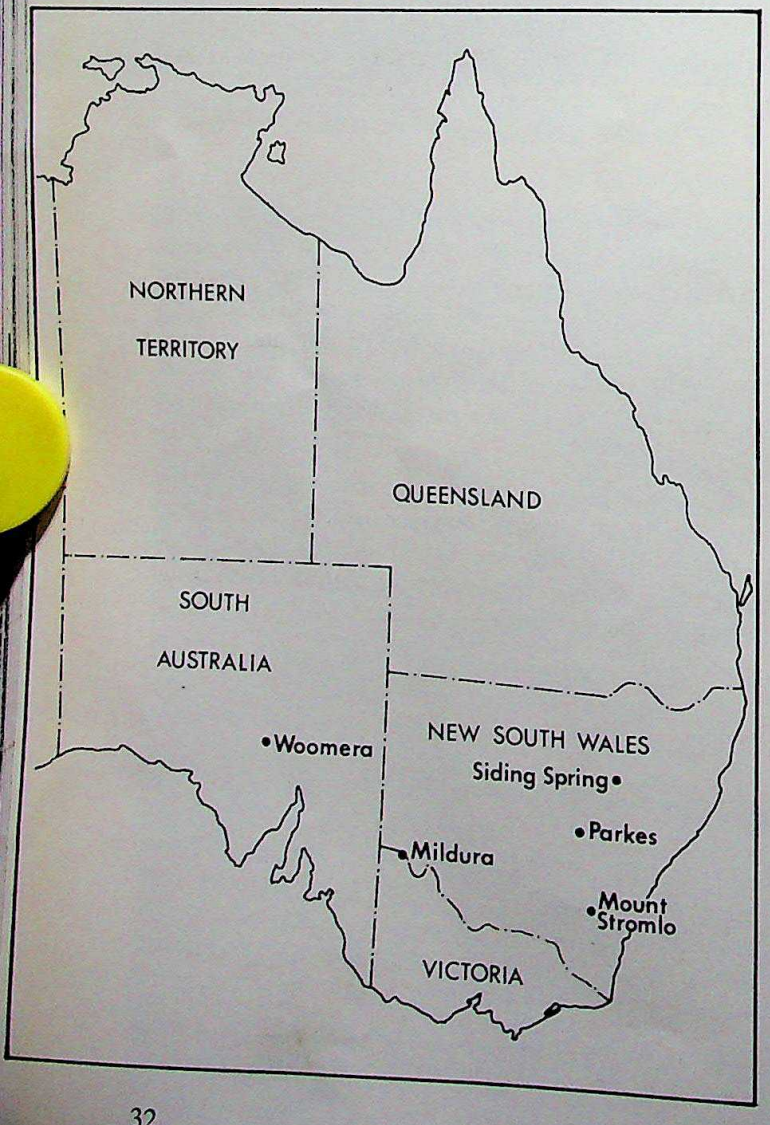
In late 1967, pulsars were discovered. The observation at Cambridge, England, of a radio source which beeped every 1.33 seconds was followed by unbounded speculation concerning its nature. Eventually, the 'extra-terrestrial civilisation' hysteria faded from the media, and it was generally agreed that the regular pulses resulted from the rotation, vibration or orbital motion of a massive, condensed star such as a white dwarf or neutron star.

Radio astronomers began looking for short-period variations in other known sources. The discovery with the Sydney University Molonglo Radio Telescope of a pulsar in the Vela supernova remnant with a repetition rate of eleven pulses a second prompted searches at the position of other old supernovae.

When a pulsar was also discovered in the Crab Nebula pulsing thirty times a second, scientific opinion swung overwhelmingly in favour of the spinning neutron star hypothesis. Further confirmation was added in 1969, when this radio pulsar in the Crab Nebula was optically identified with the star from which the supernova is believed to have originated and X-ray pulses were also detected.

In 1972-3, two X-ray sources, Cen X-3 and Her X-1, were found from *Uhuru* data to be eclipsing sources (2.1 days and 1.7 days, respectively) and X-ray pulsars (4.8 seconds and 1.24 seconds, respectively). In a beautiful observation, the time delay of the X-ray pulses was found to be in phase with the eclipse period, providing conclusive evidence for the binary nature. The optical identification of HZ Her, a 1.7-day eclipsing binary, with Her X-1 provided an orbit for the companion and this, together with the orbit of the X-ray object from the X-ray data, enabled a mass of 1.3 solar masses to be derived.

What, then, is the nature of the objects with masses near that of our sun which can revolve in



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...ds and generate vast amounts of X-ray and ...o waves? Are they related to the other X-ray ...cing companions of larger mass suggested ...e 'black holes'?

...answer these questions, we need to under- ...something of the life history of a star.

...hen a large enough concentration of gas and ...particles gathers in space, the gravitational ...ction of the aggregate cloud becomes sufficient ...vercome disruptive forces, such as gas pressure, ...the cloud will collapse as each part falls towards ...ntre. As a result of the infall, the gas in the ...re becomes denser and hotter; eventually, if ...mass of the cloud is within certain limits, nuclear ...n reactions begin and hydrogen is converted to ...m. This reaction generates large amounts of ...gy which exerts a new force, radiation pressure, ...enting any further collapse. The energy ...erated finally reaches the outside of the cloud, ...ich settles down as a hot spherical ball, shining ...ftly. We then see a star.

...The hydrogen conversion process lasts for about ...per cent of the star's light-producing lifetime, ...our sun is at such a stage. When the hydrogen ...the core of the star is used up, the force holding ...star up disappears, and the material begins to ...pse again. This collapse is arrested by the ...tion of helium, and after the exhaustion of this ...the star undergoes a series of collapses and ...lear ignitions until the bulk of the star is con- ...ed into iron. Then occurs the final inevitable ...pse, the outcome of which depends on the mass ...the collapsing star and the energy of the collapse.

...We know of two forces which occur at high ...ities which can resist this. The first is the ...ure of electron degeneracy which occurs when ...electrons and iron nuclei are crammed together. ...is force can overcome the collapse, the star will ...ually stabilise and become a white dwarf, a ...r star about the size of the earth with an enorm- ...density — over five thousand times that of iron. ...t, the collapse will accelerate, and the central ...ny of the star rapidly increase to that of atomic ...ei. At these densities, the neutrons will exert a ...endous force to withstand further compression. ...is force is sufficient, the stopping of so large ...ss causes a sudden conversion of kinetic energy ...heat: the star explodes, scattering its outer ...rts into space with velocities close to the speed of ...

...The energy released in such a supernova explosion ...es the star for a short time much brighter than ...combined light from all the stars in the Milky ...). Left behind is a small object, a neutron star, ...arger than the environs of Canberra (say, twenty-five kilometres square) but with a mass perhaps as great as thirty thousand times the mass of the earth. Any matter falling on to the neutron star will attain such high kinetic energy in the fall that it will generate X-rays when it strikes the surface.

The collapse probably also results in the neutron star rotating at great speed; if the star originally had a magnetic field, this could be so large after the collapse that tremendous amounts of radio waves and high energy cosmic rays would be generated as the neutron star spun around. If much of this energy was generated in a narrow cone near the magnetic poles of the neutron star, and if the neutron axis and the magnetic axis did not coincide, then as the star rotated the beam of energy could flick past us regularly, producing the beeps of the pulsars.

Such a model for a neutron star explains the regular pulses, and also the generation of X-rays.

Now, if the mass of the collapsing object is greater than about two solar masses, or if the core is imploding with too much energy, the neutron degeneracy forces will not stop the implosion; complete, irreversible collapse follows. The resulting system has been called a 'black hole', and the theoretical discussions of its formation, bizarre properties, and very existence are still very controversial.

The name 'black hole' describes two of the many strange properties of the system. To an observer watching the final collapse from some distance, the surface of the star will become redder and redder and quickly fade from view. To this extent the system is black. Any light or material shot at the system will behave similarly and never reappear; to this extent it is a hole.

What happens is that the stellar surface accelerates rapidly inward, and the velocity quickly approaches that of light. Relativistic effects ensue, red-shifting the light and finally making it increasingly weaker until it simply disappears*. From the distant vantage point no further change in the system will be observed because, again resulting from relativistic

** Just as the pitch of a train whistle seems lower when it is going away from an observer than when approaching him, light from other galaxies seems to shift towards red (red being of lower frequency than the other colours) when they are receding from ours. The galaxies, then, appear to be moving away from each other at vast speed. The 'red shift' suggests that they are receding from a point in space where, it has been estimated, an explosion—the initial 'big bang'—took place about ten thousand million years ago.*

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effects, the collapse takes an infinite time to complete.

Another unique property of the system is that the gravitational field near the disappearing surface becomes so large that, if anything came so close (about two kilometres for a black hole of one solar mass), it just could not escape, irrespective of its energy, but would become part of the continuing collapse.

Gas from the inter-stellar medium or from companion stars is gathered up or accreted on to all stars. In the case of a black hole, the gas will probably form a rotating disk around the black hole. The gas in the disk will slowly spiral in, gathering speed, radiating light and radio waves, and becoming so compressed that it generates X-rays. Gathering even more speed, it becomes relativistic, the radiations all become red-shifted, and suddenly the gas is irreversibly caught.

The large amounts of energy released in the formation of black holes and in their subsequent accretion of gas led to their being considered as possible energy sources in the most puzzling and interesting of astronomical objects: the quasars.

In 1962, a star-like object was found to coincide with the position of a strong radio source called 3C 273. A study of the star's spectrum revealed, however, that its light was shifted towards the red end of the spectrum by an amount that indicated the object was receding at about one-sixth of the speed of light. This implied that it was not a nearby star but an object between one and two thousand million light years away. A normal galaxy at the same distance would appear forty times fainter. The term 'quasi-stellar radio source', or quasar, was coined to describe 3C 273 and other star-like objects exhibiting large red-shifts.

Since then several hundred radio sources have been identified with star-like objects. In the last two years alone, one hundred and forty sources located earlier by the Commonwealth Scientific and Industrial Research Organisation's radio-telescope at Parkes, New South Wales, have been identified as quasars by use of the 190-centimetre telescope at Mount Stromlo. In 1965, a class of quasi-stellar objects was found with large red-shifts that have little or no radio emission, and it now appears that only a small fraction of quasars are strong radio emitters.

The extreme brightness of the quasars enables them to be seen at great distances; the most distant one known has a red shift of 3.4 and is at a distance of eleven thousand million light years. The light reaching us now left the quasar only one thousand million years after the 'big bang' beginning of the universe. The discovery and investigation of many more faint distant quasars will enable the early stage of the evolution of the Universe to be studied — an exciting prospect.

The overall light radiated by most galaxies is the integrated light from hundreds of thousands of millions of stars, although, in some galaxies close enough to be well resolved, particular parts of the galaxy show a contribution to the light from hot gas clouds. The spectra of quasars, however, show only broad emission lines and strong continuous radiation, occasionally with sharp absorption lines. Most of the continuous radiation is produced by very fast moving electrons spiralling in strong magnetic fields (non-thermal), and the rest can be explained as typical radiation from hot gas (thermal).

In many quasars the non-thermal continuum shows large variations in intensity in times varying from years to days. The staggering implication of this observation is that some variable component of a quasar, if not the entire quasar, which is producing up to one hundred times the light from an entire galaxy, may not be larger than the solar system!

The discovery of quasars stimulated a great deal of work in radio and optical astronomy, and many new types of galaxies were identified. Some of these galaxies have bright nuclei which show spectra similar to those of quasars, and some of these are almost as bright. Recently, very long exposure, high resolution photographs taken with the Mount Palomar 200-inch telescope showed wisps around some quasars suggesting that quasars may be the brightest of these unusual galaxies at so great a distance that we cannot resolve any outlying structure. In any case, it is very likely that the energy production in quasars and in the nuclei of bright radio galaxies, N-galaxies and Seyfert galaxies, is closely related.

The supernova explosion of a star produces large amounts of energy, in the form of non-thermal continuum radiation, which for a *short* time can drown a galaxy's entire star light. One theory is that in the nuclei of galaxies, at some stage, large numbers of supernovae events occur, and these are responsible for the large energy output of quasars and the related objects.

Other suggested explanations involve the collision of many stars in extremely dense groupings in the nuclei; or the formation of a very massive star, one million to one thousand million times the mass of the sun, which (if it could exist) would release large amounts of energy in a short time as it collapsed.

The final outcome could be a black hole of great mass. Such black holes in the centre of galaxies could be the remnant of dead quasars, and the swallowing up of stars and gas by the black hole could be the source of energy in the nuclei of some galaxies.

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is not certain that any of these theories will
out to be the correct one. It is certain, however,
speculation will continue into the nature of
sars and related objects. Many new observations
re made in the coming years, testing different
otheses as they are put forward.

The new 391-centimetre telescope being built in Australia will play an important part in this interchange. It is quite likely that a spectrum, or photograph, taken with this instrument will provide the key to the puzzle.

LIVING IT UP

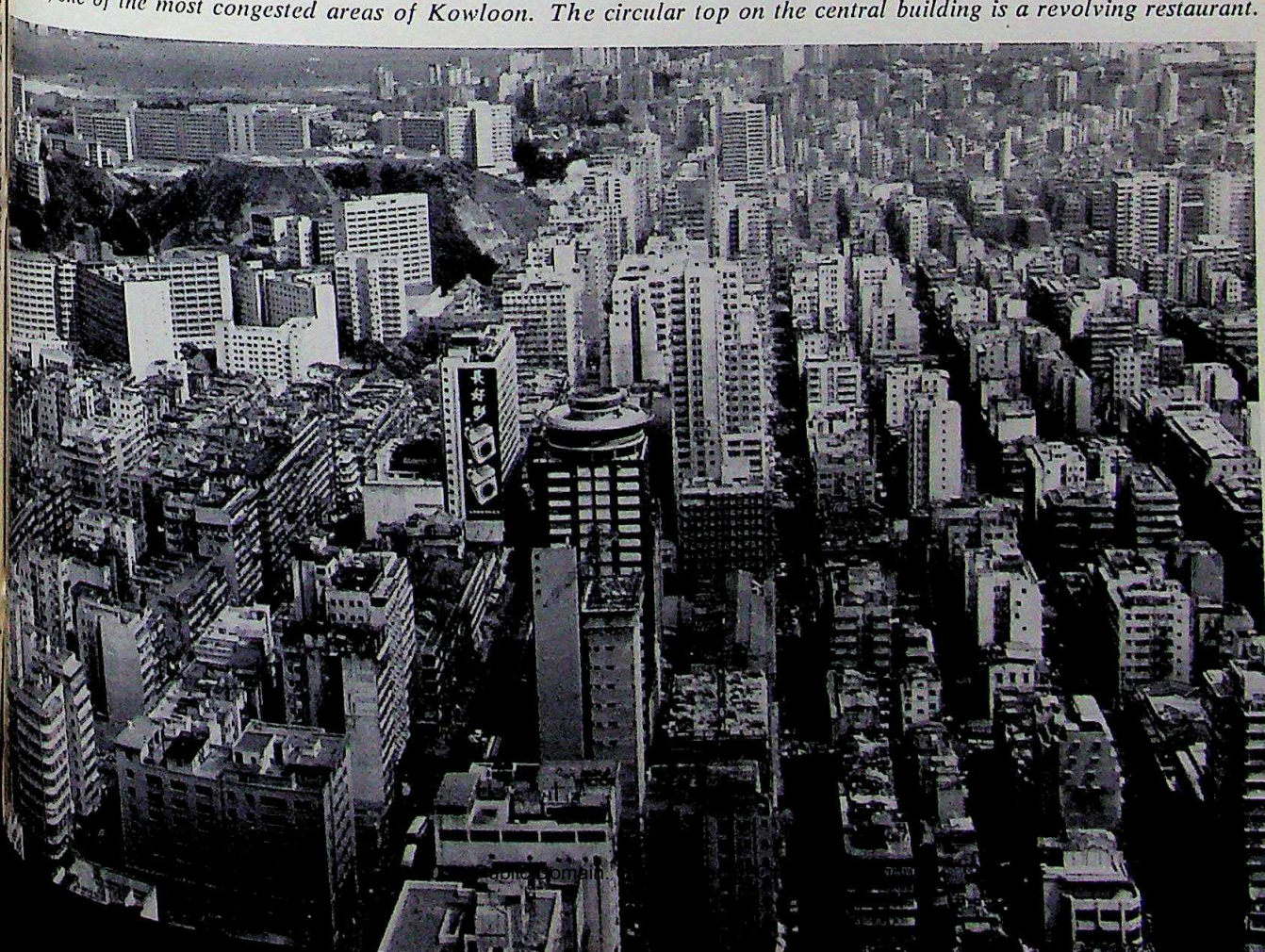
Sheelagh Millar
and Kenneth Newcombe

ARE THERE limits to crowding in human populations? If so, what are they? How will we know when we are near maximum crowding? What is an optimum density for human populations; or is such a question valid? Are there differences between cultures in tolerance of crowding?

All of these questions and more have been thrown up in the global process of urbanisation and industrialisation. With world population increasing rapidly, such questions take on an ever-increasing importance.

It is timely, then, that the extraordinary densities of human habitation in Hong Kong should come under scientific scrutiny. The Urban Biology Group of the John Curtin School of Medical Research at the Australian National University is now embark-

Mong Kok, one of the most congested areas of Kowloon. The circular top on the central building is a revolving restaurant.



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ing on an extensive integrative study of the ecology of Hong Kong.

Hong Kong is probably the most densely populated area in the world. The population density for the whole colony is about 3,700 persons per square kilometre. (In 1969, Singapore had 3,471 persons per square kilometre and East Berlin had 2,695.)

The 1971 census showed that Mong Kok district had 155,000 persons per square kilometre, which was more than ten times the density of population in Tokyo city. It goes without saying that a study of the effect of such newly experienced extremes of crowding is of major importance to urban planners throughout the world.

The Hong Kong project is directed by Dr. Stephen Boyden of the Urban Biology Group at the A.N.U. He and the authors will be spending up to ten months each in Hong Kong during the next twelve months.

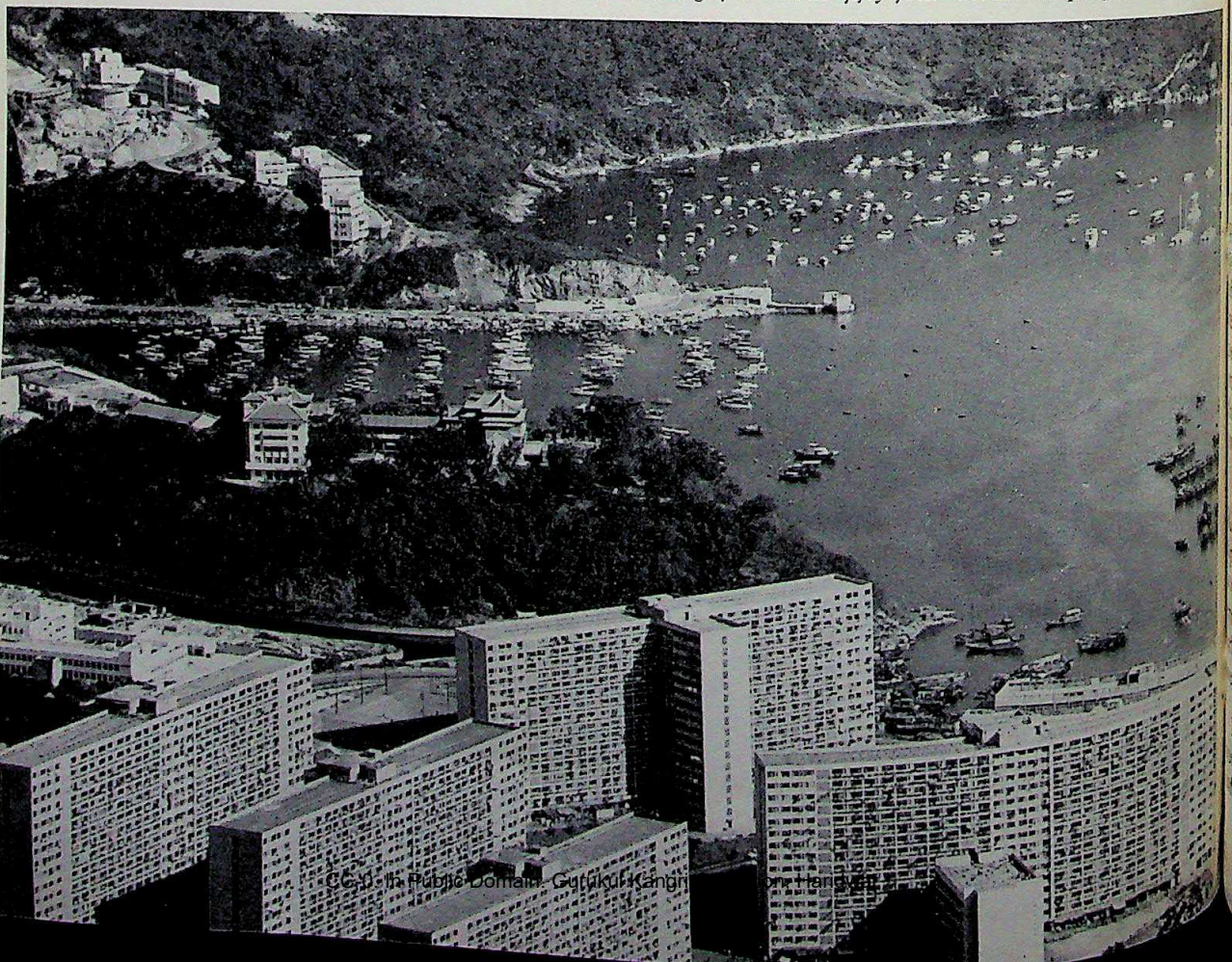
The first stage of the project will be helped by the Centre of Asian Studies at the University of Hong Kong, where the research team will be based.

Apart from the high densities of human populations there, Hong Kong lends itself to research because of the meticulous statistical records kept by the Colonial Government during the past twenty years. This, and a wealth of thorough research by local sociologists, geographers and others, mean that much of the raw data needed for the study already exists. The compactness of Hong Kong also makes it suitable for research.

Squatter populations returning to Hong Kong after the Japanese occupation during the second world war and following events in China continually placed the Hong Kong Government under stress to provide large-scale housing. In 1953, following serious outbreaks of fires in squatter areas, the Government hastily built the first of the resettlement estates. In 1956 there were about 300,000 squatters, but despite continual construction of resettlement housing estates the squatter population grew to 534,000 in 1963. Today there are still more than 300,000 squatters, although the Government has housed nearly 1,200,000 people in resettlement estates since 1954 — more than 30 per cent of the total population.

Each adult is supposed to receive twenty-four square feet of space in the early model resettlement estates, but figures down to fourteen square feet per person are common. Despite the acute crowding in resettlement estates, evidence that there are dangerous side-effects is negligible or non-existent at the moment.

Wah Fu Estate (foreground) provides low cost housing for about fifty-four thousand people.



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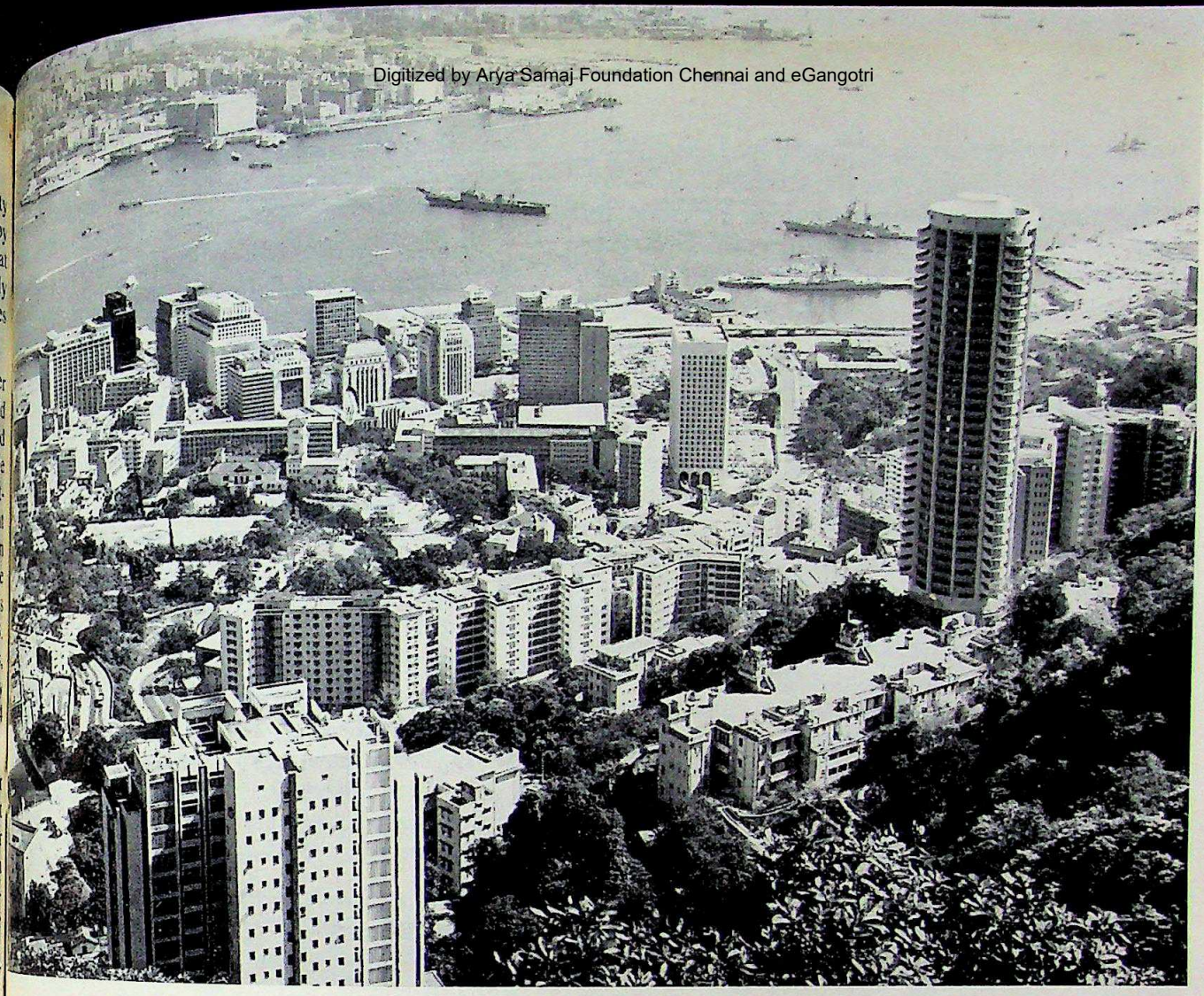

Hong Kong's Central District. Century Tower (right) has thirty-five storeys.

All in all, the Hong Kong Government has made an amazing and commendable attempt to rehouse its squatter populations, particularly when compared with other cities.

In Indonesia, Jakarta authorities are actively dismantling squatters, and in Calcutta, more than three-quarters of the population live in *bustee* or slum quarters. While the space allocation per person is about the same or slightly more than in Hong Kong resettlement estates, sanitation and services are not as good. It has been shown that the *bustee* dweller may have to share a single water tap with twenty-five to thirty persons, and a single latrine with twenty-one to twenty-three persons.

Even people living in squatter houses in Hong Kong usually seem impeccably clean and, from all appearances, happy. If this is so, there may be some surprising findings which will shake the Western urban planners' conception of what kind of urban design contributes most to the health and well-being of potential residents.

Extremely crowded living conditions are, of course, associated with many forms of disorder, from infectious disease to juvenile delinquency. Since such disorders in Hong Kong are by no means as great as to suggest a direct relationship, intervening factors must be looked for and their effects assessed.

The term 'crowding' is thus too vague. The concept must include the actual physical density situation, and also the individual's experience of that situation. Physical density, that is, the number of people per unit space, may be high and yet have no great impact on psychological or physical states, so that the people may not necessarily feel 'crowded'.

Much depends on interaction among the people concerned. Obviously, the social structure or organisation of the group of people involved determines this pattern of interaction, and each individual's experience of density. This is, possibly, the key to Hong Kong people's adaptation.

The traditional Chinese family system is still evident in Hong Kong. This is often a three-generation family unit which is the centre of all social behaviour and is characterised by great internal cohesion. It provides a fundamental supportive network within the society. Essentially, then, one is never alone in the world. On the contrary, as a child, one has early experience of living in close contact with a large number of other indivi-

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duals, and so develops a tolerance for high physical density.

The Hong Kong people, therefore, may not feel as crowded as we would expect. As the *experience* of crowding may be the basis of ill-health and social disorder, low levels of these evils would not be so surprising.

Such a suggestion is based on knowledge of the equivalent situation among animals. Many studies have been made of animals which are confined in the laboratory and eventually reach high population densities. When a certain limit is reached, the animals demonstrate certain physiological and behavioural effects. Their susceptibility to disease decreases; their blood pressure increases, as does the size of the adrenal gland, for example, and normal behaviour patterns are disrupted. There may be both extreme aggressiveness and complete social withdrawal, and disturbance of sexual and maternal behaviour, so that the normal functioning of the social group ceases.

The point past which such things happen depends on the structure of the space in which the animals are confined, their past experience of high density, and the social organisation of the group. Strict dominance hierarchies tend to raise the limit, since they control the pattern of interaction among the individual animals; the position of each animal in the hierarchy determines the extent to which it interprets the density situation, and the degree and type of disorder experienced.

So a group of social animals, raised to relatively high densities and with an established social order among themselves, will be less 'crowded' and less affected by high density than an amorphous group of mutual strangers used to spacious conditions. Within each group, those more severely affected will be the less dominant and younger individuals.

Does this pattern apply to the experience of human beings living in high densities? We suggest that ideas from animal studies are useful bases on which to consider the human situation, and to understand the great modifying influence of human cultural adaptability.

In order to investigate this and other aspects of high density living, we shall be gathering data on density, infections and organic disease patterns, levels of psychic, particularly 'neurotic' disorder, and behavioural disorder, together with information on social organisation and culturally-determined practices from all over Hong Kong.

Some available statistics demonstrate the relatively low degree of disorder. For example, the average rate of reported crimes against the person in Hong Kong from 1961 to 1967 was 30.7 per 100,000 people

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may be compared with 139.9 per 100,000 in York State in 1965, and the average rate for S. cities of over one million population — 279.4 00,000.

E. Mitchell conducted a study of emotional in South-East Asian cities* and reported many other things that *hostility* among Hong Chinese is relatively low. So it seems that aspects of the socio-cultural environment in Kong are pre-adaptive for very high density It should be emphasised that it is these rather than the physical density itself, which ably determine the state of health and happiness urban community.

Levels of Emotional Strain in S.E. Asian Cities', Vols. II, Asian Folklore and Social Life Monographs, The Culture Service, Taipei, 1972.

Sociologists, psychologists and natural scientists have all postulated some detrimental effects of high level crowding in human populations. Even in New York, studies by Langer have not revealed problems which were thought to be associated with over-crowding.

Clearly the results of the Hong Kong project, and a possible comparative study with Sydney, will shed new light on the adaptability of man to seemingly impossible environments. In turn, they may lend significantly to the solution of urbanisation and decentralisation problems the world over.

THE AUTHORS: *Sheelagh Millar and Kenneth Newcombe are members of the Urban Biology Group of the John Curtin School of Medical Research at the Australian National University.*

ook Reviews

Indian Elites

ies in Modern Indian History, edited by B. R. Nanda V. C. Joshi. Orient Longman, New Delhi. 214 pages. N 0 17 00190 0.

HE Nehru Memorial Museum and Library, established in New Delhi seven years ago, is devoted to the collec- of source material in the field of modern Indian history politics. Besides making its resources available to arch workers, it also holds seminars and lectures. Some the papers presented on these occasions are gathered this volume, which is intended to be the first in a es.

Although the papers do not ostensibly pertain to a gle theme, several of them highlight an important feature modern Indian history. From various angles they focus the crucial role of urban elite groups which were ed in the nineteenth century, and which have since then seeking to widen their popular base and to achieve ense of national unity. These objectives were only partially realised by the time colonialism ended in ; but in the process, the increasing involvement of elite groups in mass politics also went to sharpen nascent differences and conflicts within Indian society among these elite groups themselves. The most obvious that between the Hindus and the Muslims which ually led to the partitioning of the sub-continent; there were others based on region, language, caste, and economic interests, which continue to baffle the ership in India, Pakistan, and currently, Bangladesh.

Dr. Bhatia's paper analyses the composition of these groups, stressing their common middle class character well as their internal conflicts and tensions. He draws ly on the earlier researches of B. B. Misra and Anil Seal, but relates them to the theories of Mosca and Pareto. Dr. Prasad surveys the ideological struggle between the Moderates and Extremists which culminated in a split in the Indian National Congress at Surat in 1907; while Dr. P. C. Joshi contrasts the Nehru model of economic development with that of Gandhi, arguing that Nehru's *ideological* commitment to 'a conception of development in the interests of small land property-less masses of Indian society' was contradicted at the *operational* level by a type of planning which 'provided largely for the participation of the big and medium property-owners.'

To my mind, however, the two most interesting contributions to this volume are by Dr. Baker and Dr. Kumar. Baker's paper illumines the process by which the Marathi-speaking political leadership of the Central Provinces and Berar was displaced from its dominant position by the Hindi-speaking leadership during the 1930s. Dr. Kumar examines the composition, interests and motivations of some of the social groups which participated in the agitations launched by Gandhi between 1919 and 1921, bringing out sharply the differences in response between the groups in Lahore and in Bombay. 'Gandhi, who did more than anyone else to fashion India into a nation', he concludes, 'simultaneously created a style in politics which will put to a severe test the concept of national unity in India.'

On the whole, a stimulating volume, although the editors might have been wiser not to include some of the papers which do not quite come up to the scholarly standard expected of a publication of this type.

SIBNARAYAN RAY*

* *Sibnarayan Ray is Reader and Head of the Department of Indian Studies at the University of Melbourne.*

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A view of the rear of Ellenthorpe.

No Palaces, Bu

The Australian Homestead, by Philip Cox and Wesley Stacey; the Lansdowne Press 315 pages. ISBN 7018 0406 8.

AUSTRALIA has no palaces, as has Asia; no superbly architectural castles, as Japan or Europe. Except for public buildings, things in Australia are on a smaller scale; and many of the public buildings, with the exception of the Sydney Opera House, the Melbourne Arts Centre and the Adelaide Festival Hall, were put up at what many people consider to have been the worst possible time: the Victorian era, in which the perfect lines of previous European masterpieces were not only imitated but — so they thought at the time — improved by decoration for the sake of decoration.

But before the excesses of the Victorian era struck the Australian architect, something of a gentler, less exaggerated age of architecture came into this country through its English settlers: these are the remnants of Queen Anne or Georgian styles best exemplified by the work of the convict builder, Greenway, and his sympathetic but mean understood Governor-boss Lachlan Macquarie, to whom Sydney owes many of its finest buildings.

Some of the simplicity reached what is known in Australia as 'the bush'. The simple, perfectly proportioned lines of the country and town houses of Britain were transported (as were the convicts) to 'the bush', as anywhere outside Australia's cities and country towns is known. The welcome and highly intelligent additions which mostly did nothing to destroy the clean lines of the original, was the verandah, to give shade during the hotter parts of the day. Fortunately, a good deal of this simplicity lingered: a case in point is *Gowrie*, built as far as 1872 in the Toowoomba district in Queensland, which makes a perfect whole.

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The dining room at Currandooley.

Classical Echo

On the other hand, some of the houses simply grew, as the families and the needs of the owners: one such is the delightfully rambling homestead called *Low-* in Western Australia. Building began in 1840 and went on, for in 1888 the first addition was built and last major addition came in 1924.

Another perfect example of a classical tradition is *Rothorpe Hall* in one of the very beautiful places of Tasmania. The back of the house is an excellent example of Georgian architecture, with a verandah added later. To people the tower jutting from the front facade breaks generous line of the building.

would be difficult to classify the architecture of *Currandooley*, about thirty miles out of Canberra. Accord- to Philip Cox, the writer of the text, the new home- was built because the old one was too frequently ed. was finished in 1873 and the roofing replaced r a fire in 1890 by tiles imported from France. The illustration above gives some indication of the grandeur of *Currandooley*, which is still inhabited by the Osborne family by whom it was bought in 1866. Australian country homesteads have always been known for their hospitality, and two servicemen invited there for a week's stay during the Pacific war, at a time of strict meat rationing, were welcomed by the then hostess into the magnificent dining room with a wave of the hand towards the laden side-board (above) with the words — 'Sorry, boys, but we can't give you the meals we would like to, because of rationing'.

Wesley Stacey, one of the most gifted of Australian photographers, shows the same acumen in his photographs of homesteads as he did in the magnificent volume *Rude Timber Buildings* (HEMISPHERE, January 1970). Philip Cox contributes an authoritative and eminently readable text.

—DAVID GILCHRIST

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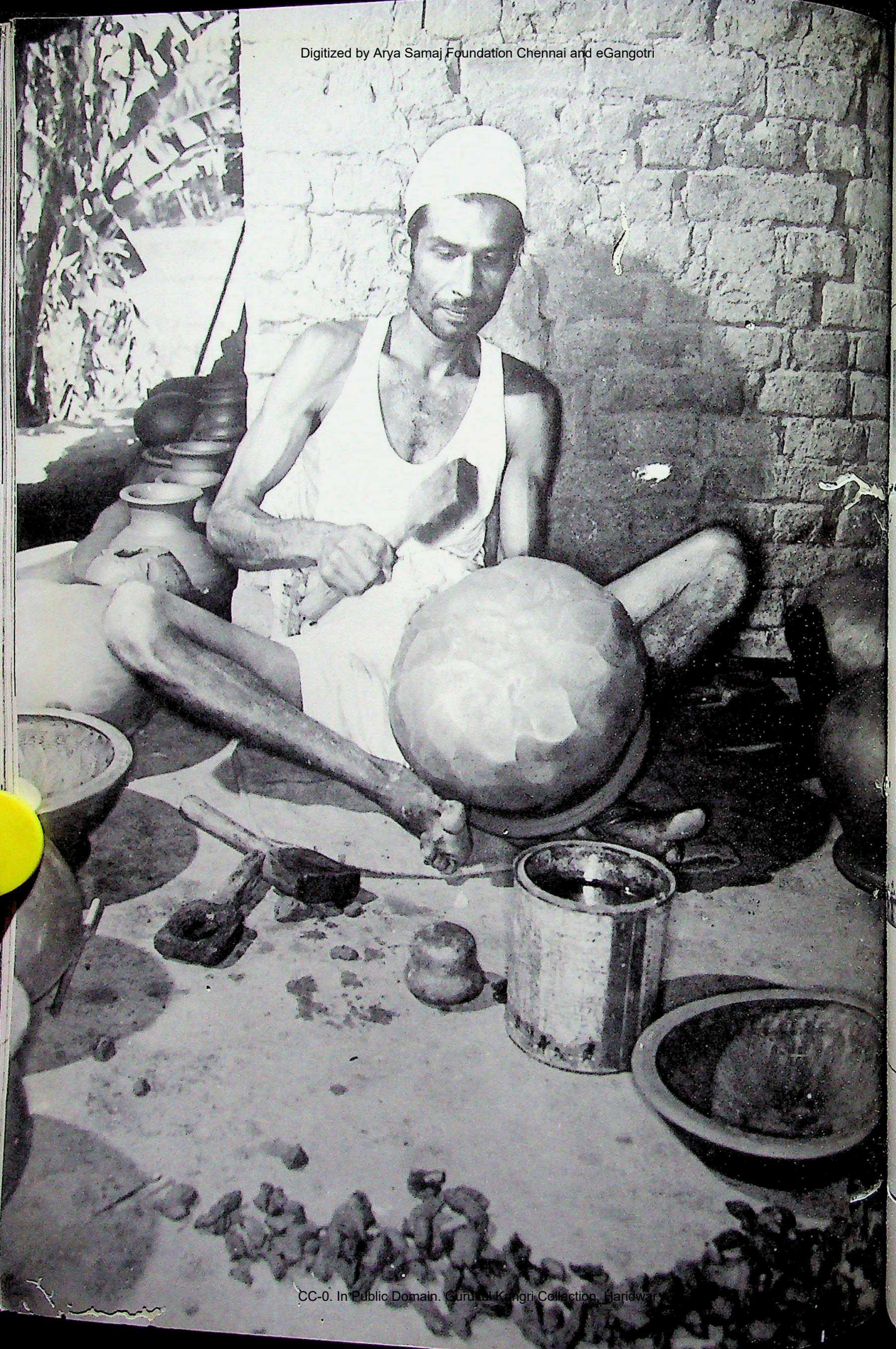

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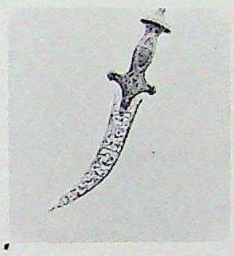

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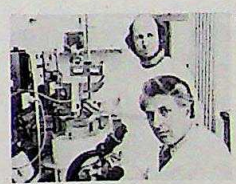

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COVER: *The painting kit of an Australian Aboriginal artist from Groote Eylandt, in the Gulf of Carpentaria, consists of several pigments, a rubbing stone for powdering pigment, a shell dish for mixing paint and a small feather brush fitted with a wax handle. (Photograph by courtesy of the South Australian Museum, Adelaide.) See article beginning on page 2.*

OPPOSITE: *Village potter, Sri Lanka. (Photo: Mark Strizic.)*

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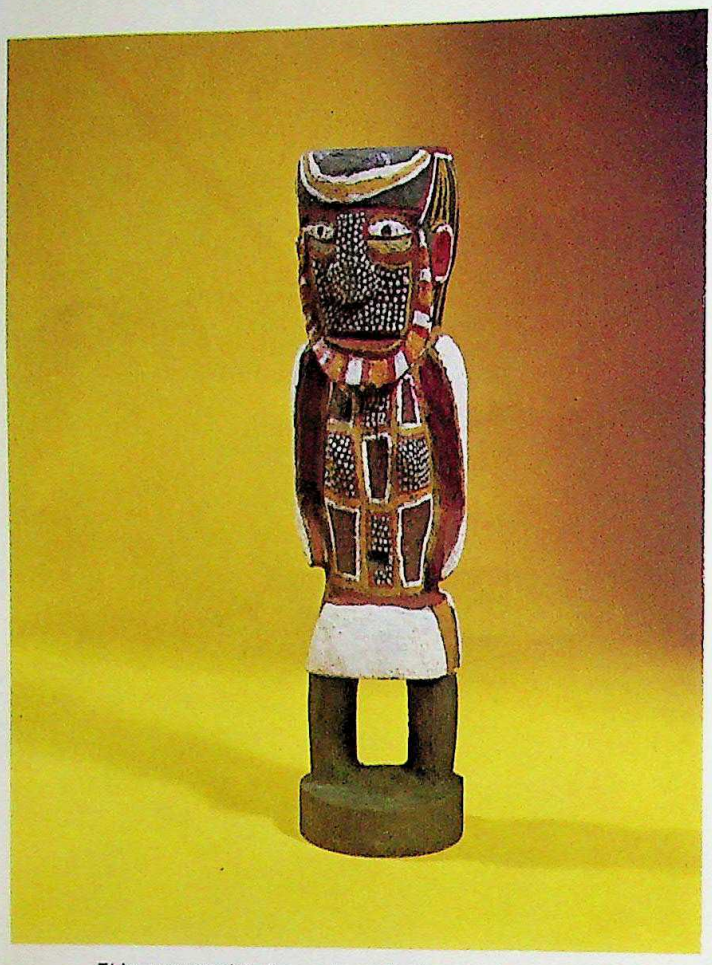
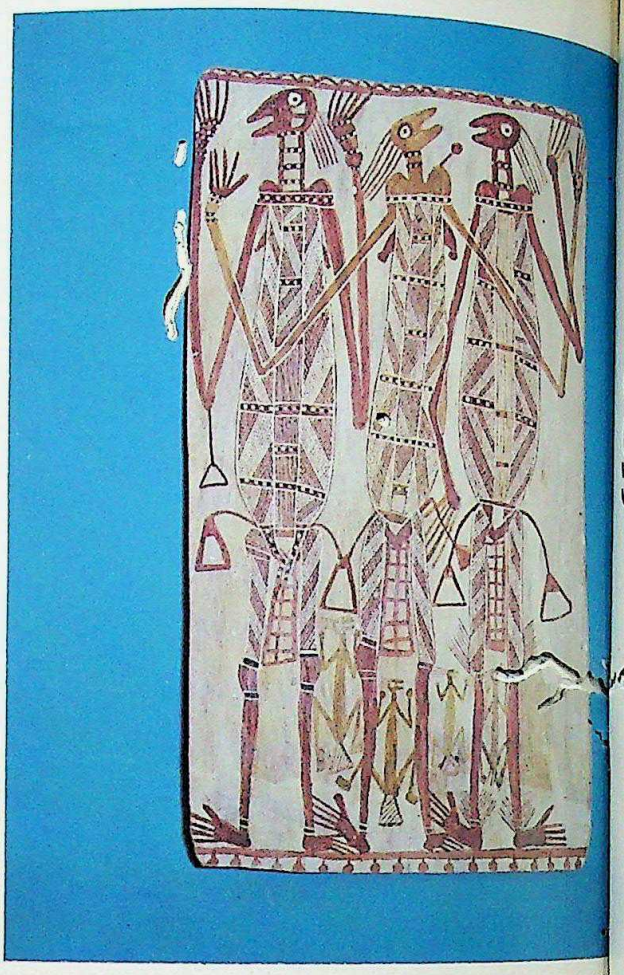


This ceremonial figure from Bathurst Island shows the skill of the people from there and from neighbouring Melville Island in combining carving and painting to dramatic effect.



A bark painting by Yirawala, whose paintings are very highly regarded. This one is of tiny spirit beings, or mimis, often used as a theme in Western Arnhem Land.

COLOUR—TO ADD OR SUBTRACT

Leonn Satterthwait

In common with many other organisms, man can perceive colour, which is therefore a pervasive element of man's environment and subject to human manipulation. People add colour to things for many reasons: to emphasise the significance of particular objects or an event with which the objects are associated; to aid in readily distinguishing things; to attract attention or to warn; to create and communicate designs and images, or simply to produce pleasing aesthetic effects. Colour may also be used to the opposite end: to conceal the presence of something; to blend an object with its surroundings; or to convey a false impression of the nature of an object or surface. Probably the most universal method of applying colour is with a coating of pigment or paint. Australian Aboriginal cultures have done precisely that.

Aboriginal use of pigments and paints reflects many of the most significant features of traditional Aboriginal culture: regional diversity, sophisticated selection and use of raw materials and a high degree of integration of the various aspects of social and cultural life. Although the regional differences in Aboriginal culture were often considerable, all Aboriginal people supported themselves by hunting, fishing and food gathering, pursuits requiring skill, effective equipment and detailed knowledge of the environment. They also developed a well-ordered social life based on highly complex systems of reckoning kinship and ancestral descent. Both subsistence activities and social relationships were given meaning and reinforcement by a deeply held set of religious precepts and traditional beliefs. These beliefs, passed from generation to generation, provided for the origin of all things and a spiritual basis for the unity of man and nature, established guidelines for personal conduct, and gave vital continuity to life by linking the 'Dreamtime' creative period of the past to the world of the present.

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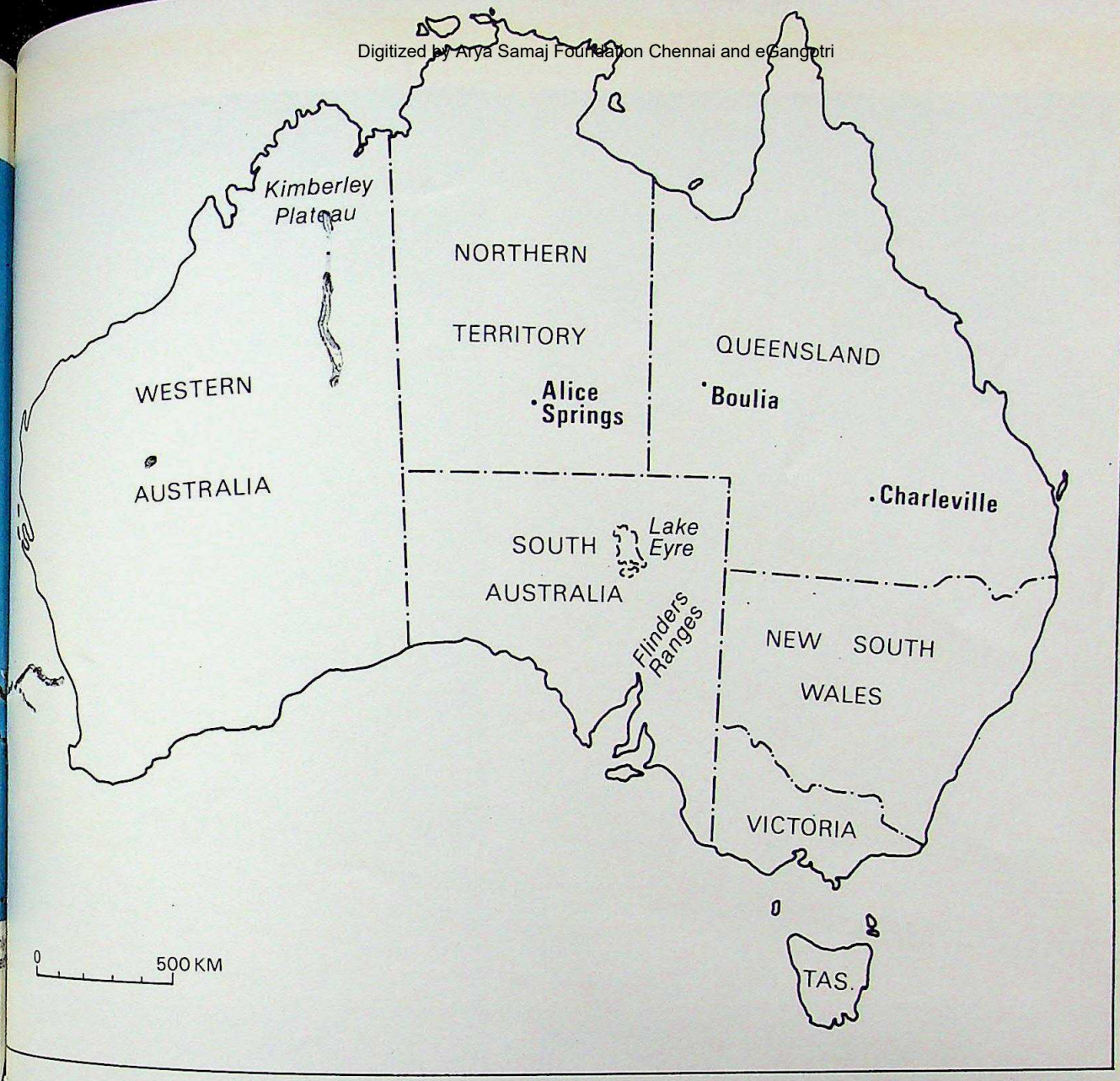

was in this cultural context that painting was both erian and aesthetic for the Aborigines. The antiquity these roles is indicated by a number of archaeological Ochre recovered from archaeological deposits over thousand years old in New South Wales and from teen to nineteen thousand years old in Victoria, rland, and Northern Territory and Western Australia nstrate that the use of natural pigments was wide- ed at an early date in Aboriginal Australia, while an stained grindstone excavated from a Northern Terri- ite provides direct evidence for the antiquity of t preparation in Australia.[1, 2] These finds suggest Aboriginal painting ranks with the world's oldest c practices.

riginal artists relied on natural sources for pig- and painting materials. The principal colours ired were red, yellow, black and white, with red lour most commonly used. Pigments were derived a number of sources: red from suitably coloured and clays, plant roots and powdered bark; yellow ochre, nickel ore, certain plant species and even ust inside ants' nests; black from charcoal and manganese oxide, and white from gypsum, lime and pipe-clay. Red was also obtained by roasting yellow ochre in a fire to convert it to red. Blue appears in cave paintings in the Northern Kimberleys of Western Australia. It was derived from the mineral glauconite.[3]

Pigments of high quality or an unusual shade were avidly sought and considerable importance attached to the localities where they could be obtained. The significance of these sites often extended to their ownership by a particular tribe or group, mythological accounts of their origin, and religious sanctions on pigment extractions. After generations of pigment removal, some of these sites looked like mines or quarries. At one such site in Western Australia the mining of ochre from a hillside deposit resulted in a cut some thirty metres wide and twenty metres deep. This excavation was made with the aid of stone mauls, wooden wedges and simple scaffolds constructed of poles.[4] Some ochres, like other items of special significance, were traded from tribe to tribe over great distances or expeditions were organised for travel to the pigment site. The Dieri people of the Lake Eyre region, for instance, sometimes travelled south to

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Above: A decorated string bag from the Northern Territory in which the traditional colours—red, yellow, black and white—are used. Below: These spears from Melville and Bathurst Islands show the range of elaborate decoration of weapons, denoting their use in ceremonials.

Above: A hollow log coffin from Eastern Arnhem Land, used as a receptacle for the bones of the deceased, and richly painted with the totemic symbols of his clan. Below: A fine woven basket from Melville Island, decorated, as is often the case, with colour.

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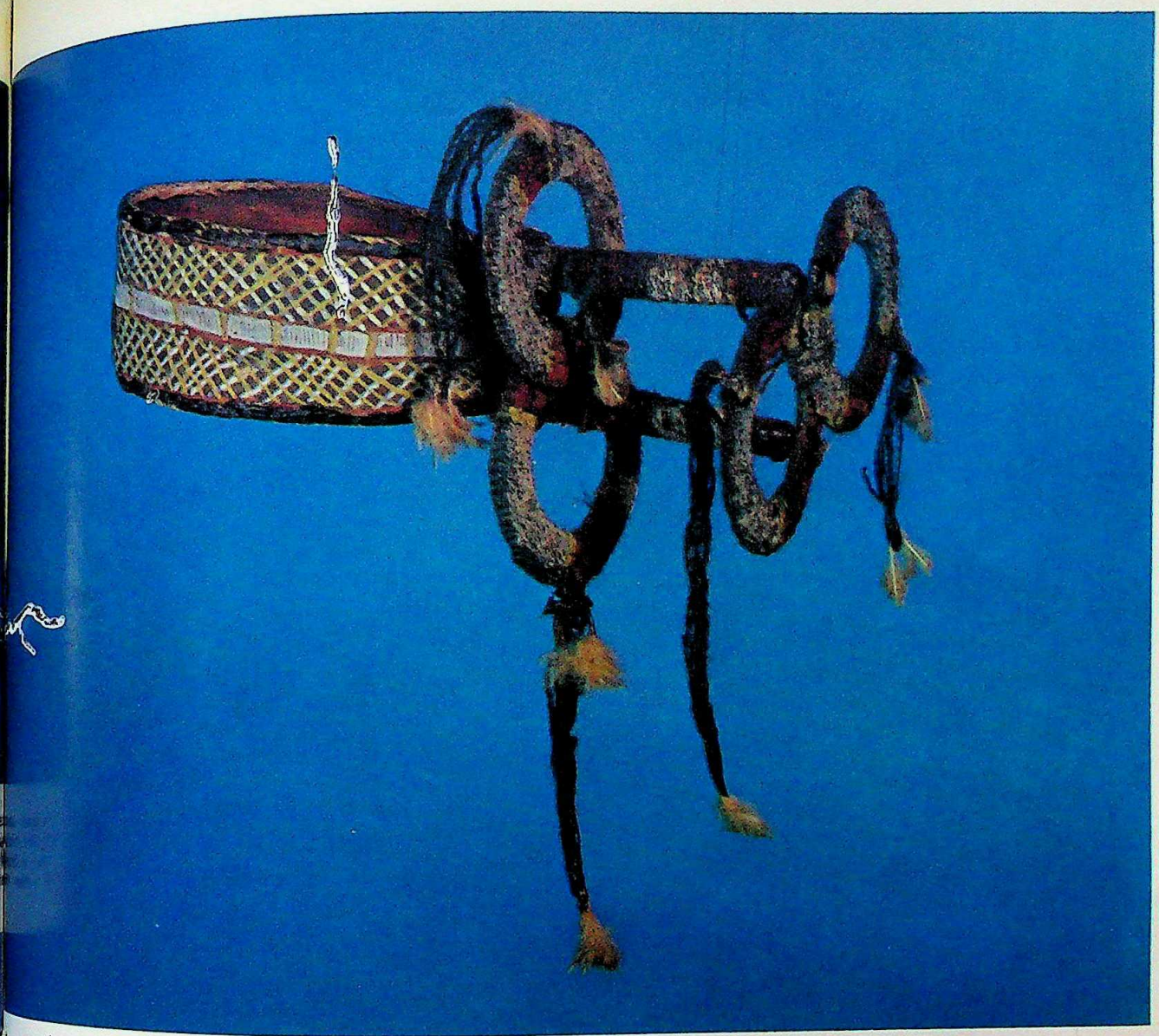

An arm ornament from Bathurst Island, such as those worn by women mourners during funerary rites.

rachilna in the Flinders Ranges of South Australia, distance of four hundred and eighty kilometres, to ish ochre. Parachilna ochre was also traded through complex network of exchange routes to places as far moved from Parachilna as the vicinity of Alice Springs the Northern Territory and Boulia and Charleville in estern and south-central Queensland.[5]

ce obtained, pigments were either used dry, like ck or ground on stone to a fine powder. The pow- pigment was then mixed with water or the fat of animals as fish, possums, emus or goannas.[6] Other stances were sometimes added in order to assist in the pigment to the surface being painted. These es include the juice of wild orchids, preparations from the bark or leaves of particular shrubs and mixtures of bees-wax and honey, and the yolk of en eggs. These were either mixed with the paint or ead as an undercoat on the painting surface.

ght was applied in several ways. The simplest methods ved application with the fingers or palm of the hand blowing the pigment from the mouth or off a sheet of bark. Brushes were also commonly used, however. These were readily made from a variety of materials, including bark, twigs, leaves, hair and feathers. Brushes were often made for specialised uses. In bark painting, for example, background colour and broad lines were painted with a strip of bark frayed at the ends; dots were made with the end of a short stick; and fine lines and cross-hatching were drawn with a brush of human hair, feather or palm-leaf fibre. Each kind of brush was held in the hand in a distinctive way when painting.

The utilitarian use of paint was associated with a wide range of activities. Hunting success, for instance, largely depends on how close a hunter can get to his prey. Aboriginal hunters frequently painted their bodies with ochre, clay or charcoal in order to blend with the colour of the soil in the hunting area or to camouflage themselves when hunting at night. Covering the body with ochre or clay also served to cool the body when sick, as a dressing for wounds, or as protection from insects or the weather. Weapons and utensils were also often covered with pigment. This practice was especially

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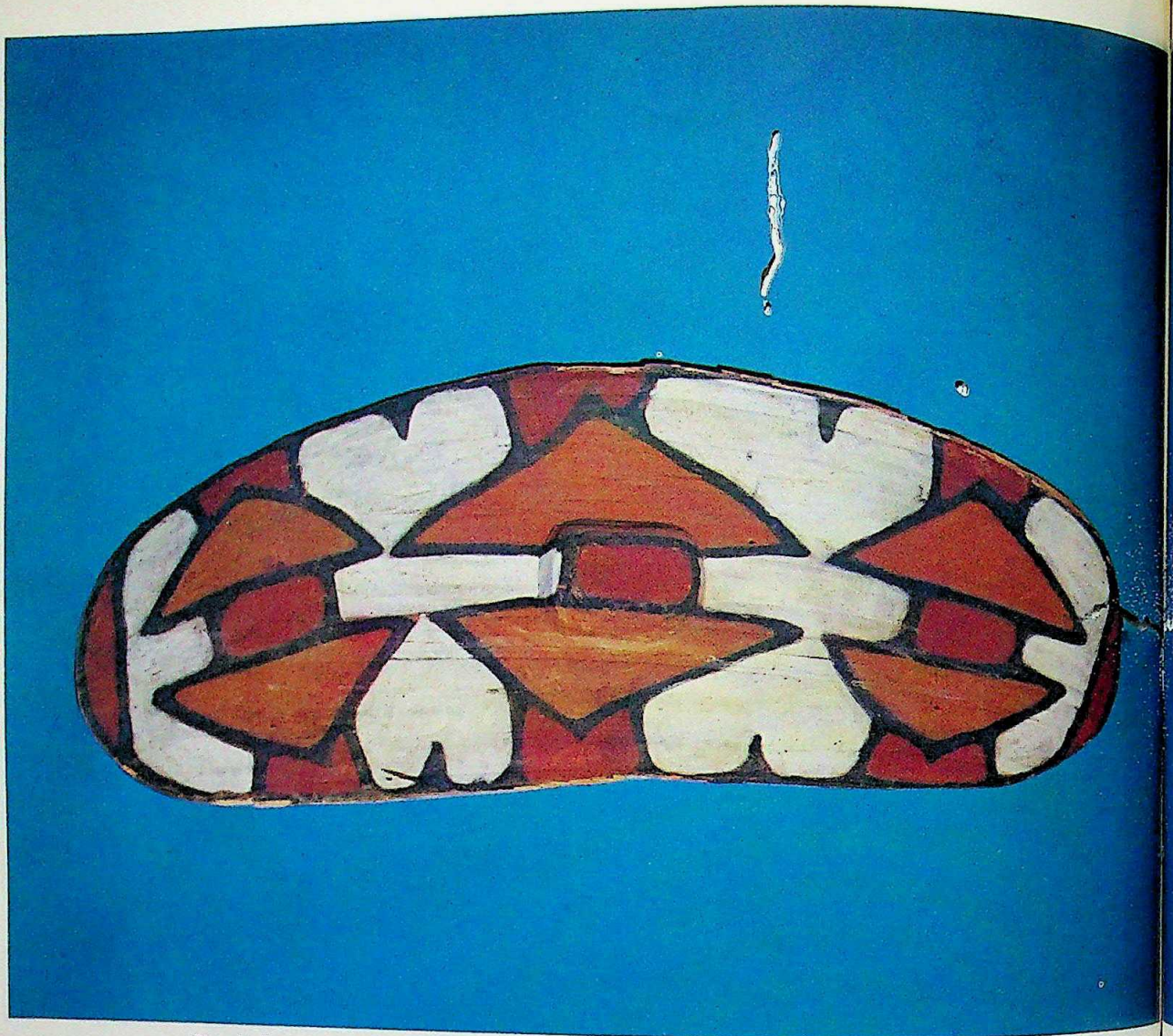

The design of this softwood shield is characteristic of the art of Northern Queensland.

common in Central Australia, where many implements were painted with red ochre. Painting these items may have contributed to their preservation, particularly when the ochre was mixed with fat. It may also have helped to dull the colour of newly carved weapons, an advantage when stalking game or pursuing an enemy.

It is in relation to art, however, that Aboriginal painting shows the greatest diversity and sophistication. Art was an integral part of Aboriginal life. In addition to painting, traditional Aboriginal forms of aesthetic expression include oral literature, music, song and dance, modelling in clay and wax, weaving, netting, carving, and engraving. Although highly talented individuals received recognition, art was not the pursuit of full-time specialists. Subject to religious or social proscriptions, every member of Aboriginal society could participate in some form of art or craft. Furthermore, art was rarely pursued as an end in itself, but was closely connected to the practical demands of everyday life or to ceremony and ritual.

The range of surfaces decorated with paint reflects the important role of art in Aboriginal culture. Pigments were used to produce paintings on tree trunks and sheets of bark, the ground, rock faces and cave walls, and to decorate and adorn the body, weapons, utensils, nets, shelters, grave posts and coffins, works of sculpture, skin cloaks, ornaments and ceremonial objects—virtually any natural or man-made surface. Painting was also combined with other forms of artistic expression, such as carving, engraving, weaving and, in a ritual setting, singing, dancing and the recitation of myths.

Painted art ranged in format from simple designs on small objects to complex works of monumental proportion on cave walls. The colours employed and the designs created varied with the availability of materials, the occasions for which the paintings were made, and local tradition. Paintings took a variety of forms: plain backgrounds and alternating bands of colour; realistic portrayals of people, plants, animals and natural features of the landscape; stylised mythological or supernatural figures; geometric shapes, and intricate symbolic patterns.

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Utilitarian objects, such as this fishing net, more than seventeen metres long, are often painted. This one, from Cooper Creek, South Australia, is decorated with bands of red and yellow ochre.

Although Aboriginal artists sometimes painted merely for amusement, to enhance the appearance of objects or as a conjunction with magic and sorcery, it is in association with religion that painting assumed the greatest significance. Ceremonial painting of bark, stone and other surfaces served to depict totemic emblems, to illustrate myths and to re-affirm, visually, sacred beliefs and the transmission of these beliefs from one generation to another. The execution of these paintings was strictly governed by traditional conventions. Consequently, paintings made in this context are not simply random arrangements of forms and figures, but tend to be highly symbolic, even when consisting only of lines, dots and circles, and to have profound meaning to those initiated in sacred tribal lore.

Aboriginal artists used colour derived from natural pigments to advantage in giving expression to a way of life and the traditions that gave this life meaning. The boldness and forceful simplicity of Aboriginal art has earned it world-wide attention as an outstanding form of tribal art. Today, both traditional and newly adopted forms of art, including painting, continue to flourish in many Aboriginal communities, where they are practised not only as an important contemporary economic activity, but also as a vital expression of Aboriginal cultural identity.

The author is Curator of Anthropology at the South Australian Museum, Adelaide.

(All photographs by courtesy of the South Australian Museum).

1. R. Edwards and P. J. Ucko, 'Rock Art in Australia', *Nature*, November 30th, 1975, p. 275
2. D. J. Mulvaney, *The Prehistory of Australia*, Ringwood, Victoria, 1975, pp. 153, 155.
3. A. P. Elkin, 'Gray's Northern Kimberley Cave Paintings Re-found', *Oceania*, Vol. 19, No. 1, p. 6.
4. D. S. Davidson, 'Notes on the Pictographs and Petroglyphs of Western Australia', *Proceedings of the American Philosophical Society*, Vol. 96, No. 1, pp. 82-84.
5. F. D. McCarthy, " 'Trade' in Aboriginal Australia", *Oceania*, Vol. 10, No. 1, pp. 86-88.
6. F. D. McCarthy, *Australian Aboriginal Rock Art*, Australian Museum, Sydney, 1962, p. 35.

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SHORT STORY

TWO TRIALS IN BURMA

O. H. K. Spate

'The law is an ass — a idiot', said Mr. Bumble in Dickens' *Oliver Twist*.

And not only in Victorian England, many people would agree. These reminiscences by a distinguished scholar would indicate that the term applied in what used to be called Greater India under the British-India which included the remote and beautiful Burma, where these trials took place before the second world war.

Emeritus Professor O. H. K. Spate, then lecturing at the University of Rangoon, retired recently from his post as Director of the School of Pacific Studies at the Australian National University after having been Foundation Professor of Geography at that university.

In the following pages, Professor Spate traces the ludicrous, if sometimes sad way of the law in pre-war Burma, with sections of its cosmopolitan population — Burman, Indian and British — displaying widely differing attitudes to the charges dealt with.—Editor.

NOT many people, I imagine, have shared my experience of sitting on two murder juries within four years. This was in Burma, which in my days—just before the war — had a reputation for a regrettably high incidence of homicide, largely attributable to the fact that most rural Burmans normallly carried about with them a *dah*. This was a machete-like jungle knife, a necessary implement on the farm or in the home, used for anything from sharpening a pencil to cutting down a small tree; where European carts had a whip-socket, Burmese bullock-carts had a slot for the dah. Useful and needful as this tool or weapon was, it was unfortunately all too handy for domestic or other quarrels. As it happened, however, both murders concerned were urban, and the tools of trade were a length of lead pipe and a pair of scissors.

Murder juries had nine members, and a majority vote was accepted. Normally an accused person challenged till he had seven Europeans, since they were reputed to be fair-minded men in anything not directly affecting their commercial interests; however, should a fair trial seem likely not to be good enough for safety, it was desirable to have a Hindu and/or a Buddhist or two, since for religious motives they could be relied upon to stick out against a capital sentence.

The first murder was commonplace in its actual event, extraordinary in its upshot. A Tamil coolie had hit another over the head with a piece of piping, fatally. This took place in daylight and in the open street, so he and his mate in the quarrel were nabbed at once and charged with murder in the Rangoon Central Court. Proceedings were carried out with all the high formality of British Justice: ushers, scarlet and silk gowns, wigs and all. But there was a bizarre note: some very nasty Burmese-Indian riots were going on, so armoured cars rushed up and down outside the Court; the Municipality, unable to clear away all the bodies, at least sanded them over. In the midst of this lawless horror, the mighty tradition of British Law addressed itself with all ceremony to this most miserable back-street squabble. This irony, however, was as nothing to that of the verdict the jury brought in.

The jury ran to form; one Hindu, one Buddhist, seven Europeans, of whom five were hard-headed businessmen and two were academics, a Professor and myself. Crown Counsel was a well-known Burmese K.C., who conducted his case in the Best Tradition of British Justice: he made his points well, but scrupulously refrained from emotionalism or any aggravation of the evidence against the accused. The only joke he made was not at their expense, but at that of the jury, or at least of its British majority. No doubt internally smiling up the wide sleeves of his silk, he asked rhetorically how it could be that such a fracas could take place in a crowded street, with passers-by almost jostling the participants, and yet with nobody raising a finger to stop it; so unlike the reaction of a well-ordered Western society. 'But, gentlemen, you are educated Europeans with long experience of the East. You are men of the world. You are aware of that inscrutable impassivity of the Oriental . . .' Five Men of the World, plus I think the Professor, leaned back to preen themselves.

The prinicipal accused faced hanging; his mate, charged only with being an accessory after the fact, could at

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...d only be transported to the Andamans. So the latter ...s left to shift or drift for himself, while one of the ...ers hanging around the Court had a dock brief to ... after the interests of the principal. That was the ...e of the trouble. This man was so utterly inept that ...ury took an intense dislike, almost a hate, towards ... The defence of both accused was really carried out ... little Tamil interpreter, who was magnificent. ...eedings in the highly multi-racial Courts of Rangoon ...ved constant interpreting between perhaps half-a- ...n languages; a difficulty for the jury, since for ...aps two-thirds of the time they hadn't a clue as to ... was being said, but since of course questions and ...ers were being translated as we went along, it was ...ssible to relax — and yet we had to keep alert all ... time, no matter how unintelligible the words being ...diately spoken. Here is where the interpreter shone: ...ing up and down by the dock, he saw to it that ...ever was said was immediately conveyed to the ...used, briefed them on when they should speak up ... when they should shut up, and altogether put on an ...irable virtuoso performance.

...e substance of the defence, such as it was, was a ...ble attempt to suggest an alibi based on mistaken ...ity: 'Was I wearing a green *lungyi* or a red one?' ...t no ice. The jury retired and the Foreman, one of ...e businessmen, looked round and said in effect 'Well, ...emen, I don't suppose any of us have a moment's ...bt that the accused is guilty; that alibi wouldn't de- ...e a child. We all know our verdict. But still, there's ...an's life at stake, so I think we should stay out for a ...e just for decency.'

...e sat around looking and feeling solemn: after all, our ...eman was right, there *was* a life at stake. Then the Hindu ...ke. He reminded us that the Judge had said that if we ... reasonable doubts, we should give the accused the ...efit of them — that was British Justice. For himself, he ... doubts and he thought that they were reasonable ...bts, but (and here I quote verbatim his unforgettable ...ch) 'of course it is not for me to give reasons for my ...ts in the presence of so many honourable European ...emen'.

...is was the pebble for the avalanche. For the next ... minutes six honourable European gentlemen sat ...d trying to find reasons for convincing themselves ...e just faintly possible—no, really it was impossible— ...ly of that flimsiest of alibis. Six: for the seventh, ...doubt no less honourable, was the only rigorously ...est man among us. The Professor was a good Scots ...byterian, and he took a logical Calvinist line: some- ...y had been *killit*, somebody had better be *hangit*. ...overruled him. As for the accessory, since he'd only ... a few years' penal servitude, nobody gave a damn ...m. So we brought in our verdict: eight to one, we ...ded the principal of having committed the murder; ...e to none, we convicted his offsider of being his ...complice in the murder.

It wasn't until the Anglo-Burmese Judge gave us an indescribably dirty look that I realised what we had done, and the enormity of it. He took it philosophically: 'Well, gentlemen, in a long experience at Bar and Bench, I have never heard a verdict like this one. However, there's no point in putting these miserable wretches through the whole business again. Case dismissed.'

The beauty of our performance was that it was basically to mark our disgust at the crass showing of the hack defence counsel that we had won his case for him: God knows how much higher he might have gone after such a coup! And moreover we had done this at the behest of a Brahmin whom in our hearts we had all rather disliked. Truly, the human mind is a wonderful thing.

Even the academic mind. I have heard that there are some States in Australia in which academics are debarred from jury service. It has been said in opposition to this odd quirk that the academic habit of mind is just what is needed: detached, logical, judicious, accustomed to the weighing of evidence. I present my evidence with no further comment.

My second murder wasn't a murder at all, though a man had died at the hands—or rather the left hand—of another man. This time I was determined that there should be no repetition of judicial scandal, and by the most shameful jockeying I won out over a senior Public Servant with a Dickensian name, in an actual contest for the Foremanship.

The locale was not a sordid narrow back street in central Rangoon but Kemmendine, an attractive suburb which was virtually a Burmese village incapsulated into the city: little wooden cottages with thatched or tin roofs, verandahs, a good deal of greenery. On to the verandah of an Indian barber's shop enters an ethnic Burman, a lounging tough who demands a shave forthwith. The barber is giving a haircut: 'as soon as I've finished this gentleman . . .' The tough goes outside and throws stones onto the tin roof. The barber comes out to protest; a scuffle, and the Burman falls to the ground with blood pouring from the right side of his neck; a major vein has been jabbed and he dies on the spot. Manslaughter at most, one might think, but the police charge is murder.

The most interesting aspects of this case were the extraordinary racial diversity of the witnesses, and the extraordinary uniformity of their evidence. Burmese, Anglo-Burmese, Anglo-Indians, assorted Indians, even Chinese. I remember one Anglo-Indian who was brought from jail, in chains: his name was Cyril, as unimpeachably Anglo-Saxon as could be, but he was known to his Burmese neighbours by a less flattering title. The Anglo in his ancestry was a long way back, but he insisted, to begin with, on being examined in English until the Anglo-Burman Judge cut through this, and we got along a lot faster in Burmese. Witness was not intimidated: when he was told that he might leave the box there was an argument, and the Judge intervened to

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elicit that he was demanding his rights as a witness — his legally allowed tea, or at least tea-money. British Justice unbent: 'He's a witness like any other: let him have his tea.'

As for the uniformity of the evidence, I don't think it was due to any sinister conspiracy; rather I think the witnesses were testifying to the truth of a story whose outlines were indisputable. It is clear that the Indian was a nice man, liked by his neighbours of whatever race; the Burman was a bad hat, expendable even by his fellow Burmans. The outcome of the scuffle seemed quite natural. I was particularly impressed by the fact that there was no evidence that the barber was left-handed, and yet in a face-to-face altercation the dead man had been jabbed on the right side of his throat. I recalled how often I had seen a barber, interrupted in his hair-cutting, thrust his scissors alongside his comb in his left hand. With this gesture the left hand, thrown upwards in a gesticulation of protest, would naturally connect with the opponent's neck on the right-hand side.

At any rate, we had no doubts at all as to the just outcome: it took us about thirty seconds to agree on our verdict, and our only anxiety was that we should deliver it in such a form that the barber should depart a free man forthwith, absolutely and unconditionally. The Judge assured us on this, and we left in a glow of virtue and benevolence.

In both cases the aftermath was interesting and indeed moving. All through the first trial the accessory, who did not face death, was in an abject jelly of fear; the principal, who did, stood motionless. A gaunt man, with high cheekbones, neck and head rising out of the rough blanket around his shoulders, he looked like Sargent's fine portrait of a Sardinian peasant; and his face was as immobile—it seemed more immobile—than the painted face of the picture. But when it was over and we were in the corridor outside the court-room, he came to thank us, and then we could see what an effort of iron control had been needed to keep that rock-like stance through the hours when he was facing death. It was like the release of a tightly compressed spring; bowing before us wildly and jerkily, bending almost to the ground, he was almost sobbing with rapture. We had been embarrassed enough by the Judge, but this was worse; and yet, there was a perhaps unworthy and patronising pleasure in having wrung such an ecstasy of gratitude from a fellow-man.

The Kemmendine case ended differently and much more pleasantly, in a spontaneous inter-racial expression of pleasure. The little barber of course was all smiles and gratitude; and not only he, but a whole procession of all the witnesses—led by a Burmese woman who had more English than the rest—who came in a body to thank us for a good decision. There was a spontaneousness and sincerity about it that warmed the heart. We felt good. British Justice had been vindicated. Or perhaps I should say more simply, fair play had had a fair go.

BOOK REVIEWS

NINE NOVELS OF CONTEMPORARY INDIA

Chakra, by Jayawant Dalvi, translated by Gauri Deshpande, Sangam Books, Orient Longman, Bombay; 123 pages.
Voices/The Walls, by Vaikom Muhammad Basheer, translated by V. Abdulla, Sangam Books, Orient Longman, Bombay; 97 pages.
Drift Wood/The Bull, by N. P. Mohammed, translated by P. Bhaskaran and V. Abdulla, Sangam Books, Orient Longman, Bombay; 95 pages.
Striker/Stopper, by Moti Nandi, translated by Mihir K. Das, Sangam Books, Orient Longman, Bombay; 196 pages.
Pratidwandi, by Sunil Gangopadhyay, translated by Enakshi Chatterjee, Sangam Books, Orient Longman, New Delhi; 131 pages.
Temporary Answers, by Jai Nimbkar, Sangam Books, Orient Longman, New Delhi; 221 pages.
Children of God, by Shanta Rameshwar Rao, Sangam Books, Orient Longman, Bombay; 157 pages.

CHAKRA, by Jayawant Dalvi, is a brilliant rendering from Marathi into English of a novel which with its strong touches of the obscene and the scatological suggests vividly the sordidness and violence of a Bombay slum. Dalvi's slum colony of pimps, prostitutes and beggars lives at the edge of sudden death from dysentery, starvation and sporadic violence, their misery relieved only by moments of wild 'happiness': drunkenness, sexual pleasure, memories of happier times such as the heroine Amma's dreams of Pondicherry and her adulation of a heroic criminal now rotted with venereal disease. Touches of graphic horror, sensuous evocations of life at its crudest remind us of such sordid masterworks as *Bubu de Montparnasse.* With leading characters of such hectic vitality amid stinking poverty as Amma and her son Bapya, *Chakra* is a necessary corrective to the image of romantic India.

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...e translator of Muhammed Basheer's two short novels ...s and *The Walls*) writes of the extreme difficulty ...dering his taut, 'artfully simple' and economical ...slam into English. The effect is something like a ...e-gun firing in very short bursts: curt sentences, ...mythia, exclamations, dialogues like a police- ...ngation. In *Voices* the enigmatic ex-soldier, like a ...ted ancient mariner, calls on the author in the ...e of the night to hear the confession of his bizarre ...d longing for death. There follow surrealistic scenes ...alogues of his experiences in India's wars, the black ...our of a homosexual encounter, his search for lost ...s, his venereal disease. Basheer, we see, is the ...e of India though there are scenes more strongly ...pective of Camus and Genet. The background of Indian ...life—hermaphrodites, pimps, whores of all the sexes ...s the scene of bitter revelations of war and misery. ...s the voice of the lost and the damned. Startling ...ntinuity, interjections and a constantly shifting time- ...me make this a compulsively readable story. In con- ...*The Walls*, autobiographical and impressionistic, tells ...asheer's prison life in a fluid sensuous monologue of ...al fantasy, mixing realism with lyricism, pathos, ...edy and much irony. Though it lacks the tautness and ...ality of *Voices*, *The Walls* is a more humane and ...ful treatment of the human condition at the extreme ...ers of deprivation and pain.

...K. P. Mohammed's slow unfolding in *Drift Wood* of the ...e story of Amina and Ibrayhim (in the English trans- ...on of the Malayalam by Bhaskaram and Abdulla) dwells ...ectively, often satirically, on a Muslim community in ...a. Aided by his tricky friends, Ibrayhim returns from ...war (like Basheer's soldier-hero), in which he is sup- ...sed to have died, to reclaim his wife from the arms of ...older, half-pathetic capitalist Khader whose materialism ...seen in ironical contrast to the passionate earthiness ...the poor. Mohammed's other short story *The Bull* takes ...poetic treatment of passionate experience a stage ...her, from realism to surrealism. In a haunting expres- ...on of adolescent awakening to love, the snake and the ...l symbolise with some violence the pain of the boy's ...sion for the desired body of Pathook. Mohammed's ...ing is subtle, disturbing, lyrical.

...totally different Indian world dominated by action is ...ealed in Moti Nandi's tantalising novels of footballers ...Bengal. *Striker* portrays the rise of a poor boy to pre- ...minence in the 'poor man's game'. It is a tribute to ...di (a sports writer turned novelist) and his competent ...slator Mihir Das, that he is able to communicate so ...the peculiar excitement of football. Prasun has the ...ible task of succeeding at the game to gain fame and ...ney and to wipe out the stigma of his father's disgrace ...used of accepting bribes to lose a key match). Nandi ...es the boy's struggles assume epic proportions with- ...destroying credibility. An antithetical situation (even ...the football-skill depicted that of a 'defender' as ...sed to an 'attacker', as the titles suggest) is pre- ...ed in *Stopper*. The ageing footballer Kamal has to ...y himself to his football-hating son. Nandi demon- ...es the older man's fall from power in football circles ...the new young footballers challenge his pre-eminence ...scorn his religious dedication to strict training and ...al discipline. Against the background of commercial ...utta, the alliance of big business with the poetic ...esis' of the football world provides external conflicts ...match Kamal's battle for his own threatened integrity ...for his son's respect. Nandi treats with brilliance a ...ingly neglected side of modern urban Indian life.

...raidwandi has been filmed by Satyajit Ray who com- ...ds Sunil Gangopadhyay's visual imagination and poetic feeling in a foreword to Enakshi Chatterjee's English translation. Vividly evoking life in contemporary Calcutta, the story centres on the young Siddhartha's uneasy relationship with his sister Sutapa, both members of a decaying aristocratic family in Calcutta, passionate creatures given to outbreaks of anger, frustration and despair. The family struggles for survival tragi-comically. Siddhartha searching for a job comes to hate a system that expects him to cower before pomposity, exploitation, corruption. Despising the revolutionary antics of the radical politicians, he carries on instead a half-comic personal vendetta against the world. The struggle is set against the boy's painful awakening to sexual love, while his sister's sexual corruption by businessmen and playboys breaks the last link between Siddhartha and his home. This novel charts with a rare combination of humour, pathos and satire, the frustration of a sensitive young Bengali trapped in economic slump and urban decay.

In *Temporary Answers* Jai Nimbkar, writing in English, turns the spotlight on a woman in contemporary India for a change. But this novel of an Indian woman doctor at odds with family, society, friends and herself, holds too few surprises. Her rebellion turns out to be psychological rather than social (in spite of the frank social criticism of the early part of the book) as Jai Nimbkar charts Vineeta's progress (or is it regress?) from stunned widowhood to love and work. We are given tantalising hints of a never really developed deeper neurosis such as when Vineeta watches, pruriently fascinated, the flogging on his buttocks of a boy suspected of thieving. The author, rather surprisingly, insists on the universality of middle-class behaviour and therefore on the relative irrelevance of Indian local colour. The style though competent and fluent is often prolix, the story unfolding with too little real drama, the secondary characters being insufficiently developed.

At the other end of the social spectrum are the actors in Shanta Rao's very moving saga (in English) of the 'untouchables', the 'harijan' ('Children of God' of the title), who were the subject of Mulk Raj Anand's famous novel of the 'thirties. Shanta Rao in a new departure for a children's author tells a tragic tale of a woman's desperate struggle for dignity and love against caste tradition which like Dalvi's *Chakra*, does not make for comfortable reading. The heroine is passive, gentle, patient under appalling injustice. Not so other 'untouchables' of her family, notably the bitterly rebellious picaroon of a brother Boda who finds no justice anywhere, not even in the trade union he joins in Bombay, hypocritically flying the flag of socialism. Only Gandhi's *satyagraha* movement, by putting into practice the universal love of Krishna together with the unspoiled Christianity of the wandering mystic healer Father Puerre, bring hope. The harrowing realism of the novel is marred by sentimentality, in contrast to the iron-grim bitterness of *Chakra* which also deploys a ferocious comic spirit absent from the deadly serious *Children of God*.

These nine novels offer a comment on, and a vision of, contemporary India; they suggest a manifold complexity, a bewildering but vital variety of moods, attitudes and social classes. It is always perilous to generalise about India, as these novels demonstrate.

HAYDN WILLIAMS

The reviewer, a Senior Lecturer in English at the University of Adelaide, has written several books and articles on Indian writers in English.

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MORE THAN DEFENSIVE

Rafe de Crespigny

FOR more than two thousand years, travellers from China have told legendary tales about, and in factual reports described, the Great Wall. In size and scope, this line of defences covering more than three thousand kilometres represents a greater achievement of mass engineering than anything in the classical world of the Mediterranean. Unlike the Seven Wonders of the West, the Great Wall of China maintained its value and existence for centuries after its construction.

Very often, foreign writers and historians have seen the Great Wall as a gigantic military folly, an ancient form of the Maginot Line, tying the armies of imperial China down to a static defence line and a morale of defeatism. In fact, however, the Wall was a magnificent mechanism of defence. Properly maintained and guarded, it was practically invincible, and in modern times it has fallen into disrepair only because it is no longer needed.

The problem the Chinese solved with the aid of the Wall was the problem that any agriculture-based civilisation faced in dealing with non-farming neighbours. The people who lived to the north of the Chinese cultural world, in the open steppe country of present-day Inner Mongolia, were for the most part nomad pastoralists. In all that region, along the fringes of the Gobi desert, the rainfall is too light for permanent settlement and farming, and it is only where irrigation is feasible that Chinese-style agriculture is possible. Across the rest of this broad band of territory, the people's livelihood depended on flocks and herds of cattle, sheep and goats. In many areas, it is so dry that not even grass grows long enough for harvest and storage, so the herdsmen must move from place to place, driving their animals and bringing their families and all their possessions from one grazing ground to the next.

Inevitably, there was a cultural contrast and potential conflict between the people of the steppe and the peasant farmers of China to the south of them. In times of drought and difficulty, the non-Chinese tribesmen would look upon the grain stores of the farmers as an additional source of supply for the fodder that their animals needed. And at any time, regardless of the season, there was always the possibility that some small band or an army of tribesmen could join together to raid and plunder their prosperous sedentary neighbours.

For any government of China, the defence of the northern borders was a major problem. It was seldom possible to defeat and hold a major group of nomads in captive submission. The very nature of the nomad-peasant conflict ensured that an army of levies raised in China, operating on foot, would be outpaced and out-manoeuvred by mounted men; and the nature of the Chinese farming economy gave little opportunity for extensive breeding of horses or training of cavalry. If the Chinese were to deal effectively with mounted raiders, they needed some method of regaining the initiative from their swifter enemies. The Wall was part of the answer.

The Great Wall of China was not designed merely as a defensive rampart, to be defended at every point. It was designed as an obstacle. When a raiding party of horsemen came to the Wall, they could either capture a gateway and force their way through, or they could scale the barrier at some intermediate point, winching their horses over or building a ramp for them as they did so. On their side, however, the Chinese had now gained information about the raid, the element of surprise was lost, and the defenders had time to raise an army and receive the invaders; when the raiders were defeated, the Wall remained as a major obstacle to their flight and an ally to the defenders as they pursued.

In this way, the Wall was an essential part of a defence plan which included provision for small watchtower garrisons and regular patrols along its length, with signalling devices of flags and bonfires, and an administrative system which could summon men to arms within a very short time of the receipt of the news of a raid. So long as this system was properly maintained, the dangers to a raider were so great that few would be prepared to take the risk, and it was only at the comparatively rare times of strong and central leadership among the nomad peoples that the Chinese defence line was seriously challenged.

In its first form, the Great Wall of China was completed by the general Meng Tian of Qin. His master, the First Emperor of Qin, who had conquered the whole Chinese world and taken the imperial title in 221 B.C., sent Meng

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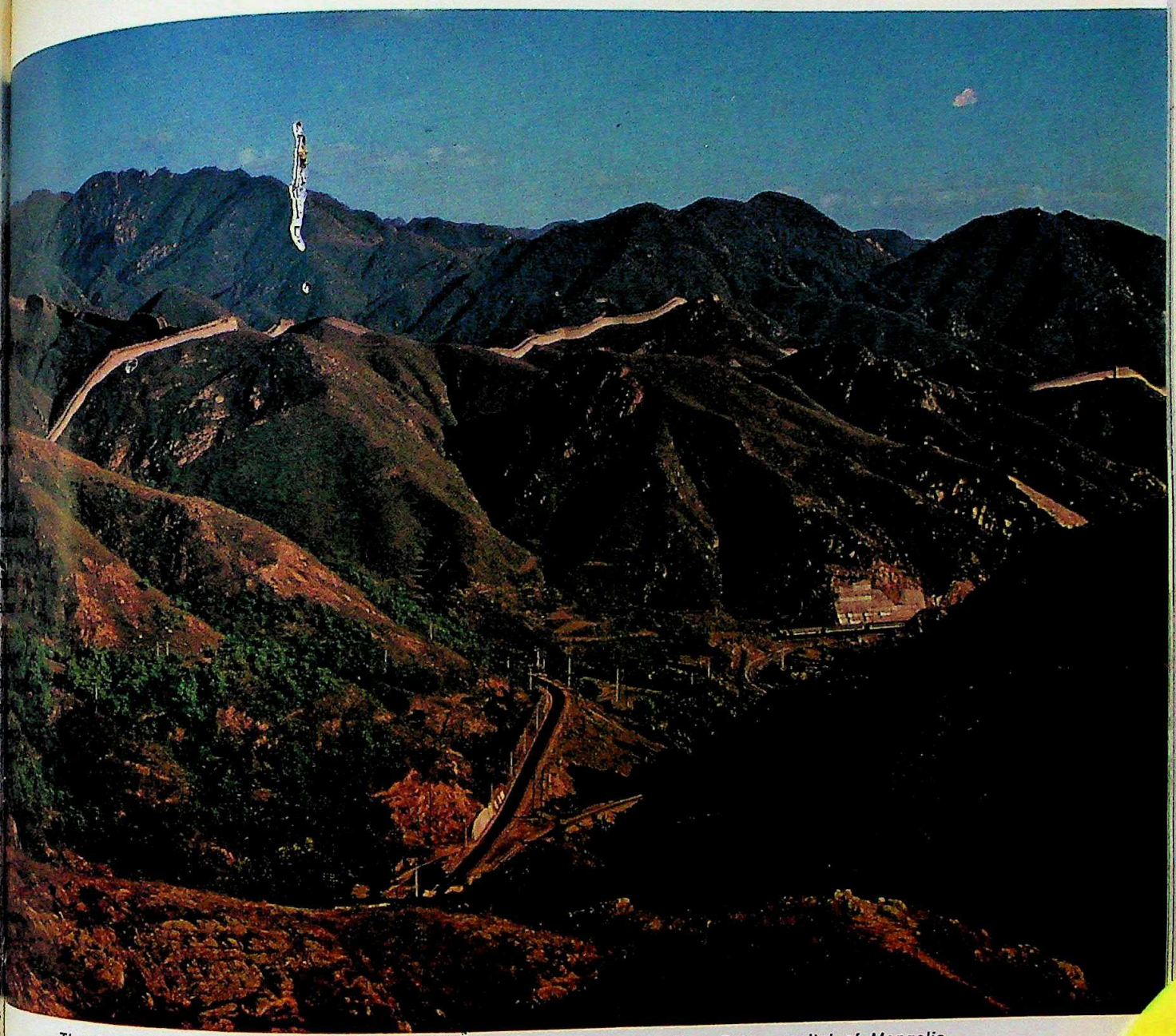

The Great Wall, showing the railway line that leads from Peking to Ulan Bator, capital of Mongolia.

with a great army to settle the northern frontiers. ording to the standard history, Meng Tian

ized control of all the lands south of the Yellow River d established border defences along the river, con- ucting forty-four walled district cities overlooking the er and manning them with convict labourers trans- ted to the border for garrison duty . . . He utilized e natural mountain valleys to establish the border fences, scooping out the valleys and constructing parts and building installations at other points ere they were needed. The whole line of defences tched over ten thousand li from Lin-tao to Liao-tong d even extended across the Yellow River along the ng Mountains and the north.[1]

this text, it appears that the Great Wall of Qin ded all the northern course of the Yellow River: the south of present-day Manchuria, the line of ications ran west to the northern Ordos loop and then ably south to the region of modern Lanzhou in Kansu. present Great Wall of Ming and Qing times cuts diagonally south of the Ordos desert within the loop of the Yellow River and the early state of Qin had a wall also on that line, but the frontier of Meng Tian evidently lined the river with walled cities, maintained by irrigated farmlands and inhabited by forced convict settlers.

In fact, however, this Great Wall of Qin was only the culmination of development which had been taking place for more than a century. Even before the final conquest, the state of Qin and its rivals in the north, Zhao and Yen, had already established this pattern of frontier defence in the regions under their control. Meng Tian confirmed and established the frontier line in the north, but much of the basic construction had been carried out years before. Indeed, the one great advance of the Qin armies, to control and colonise the region of the northern loop of the Yellow River, soon became a casualty of the civil war which engulfed all China after the death of the First Emperor in 209 B.C. When the empire of Han succeeded to

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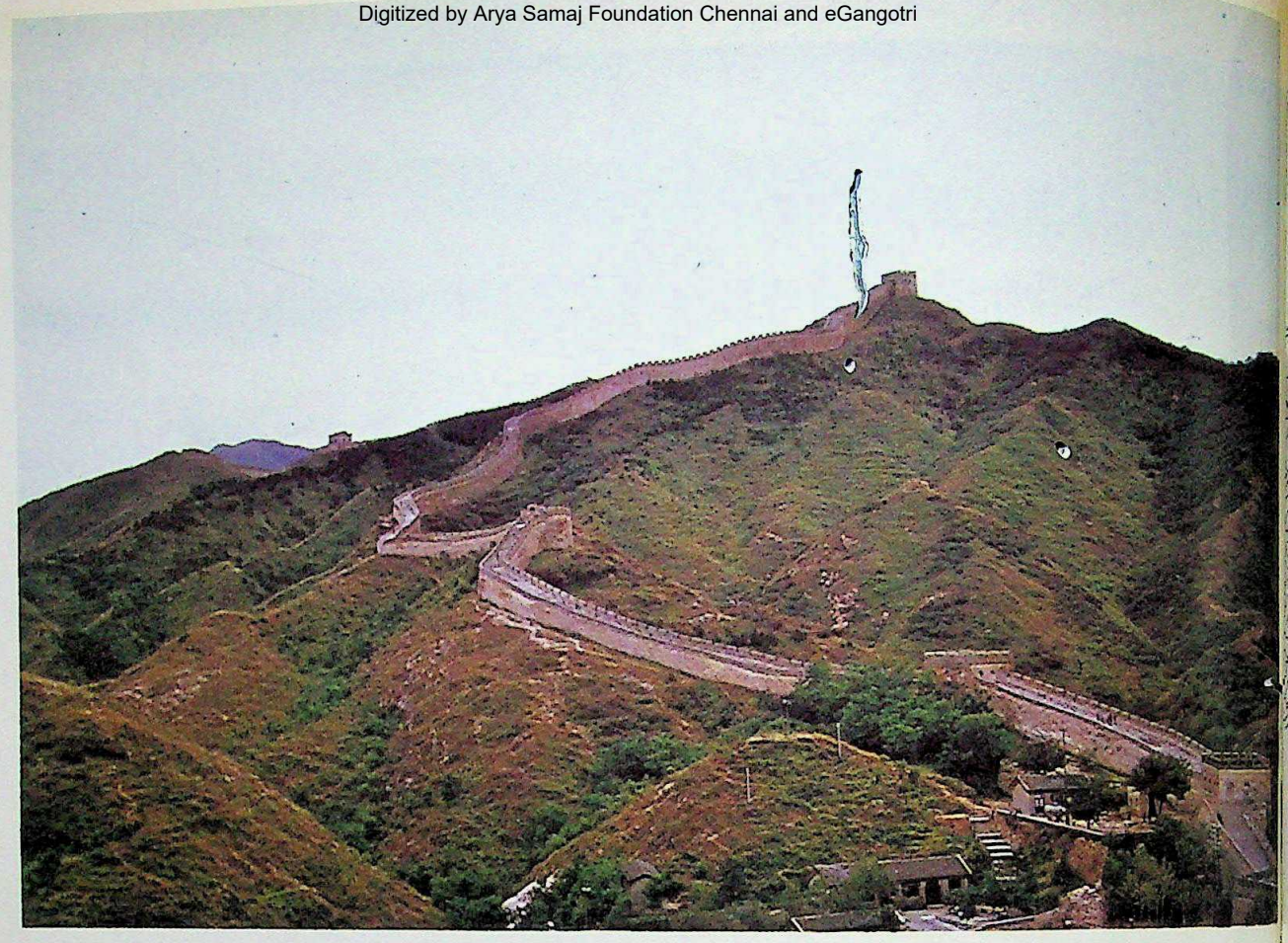
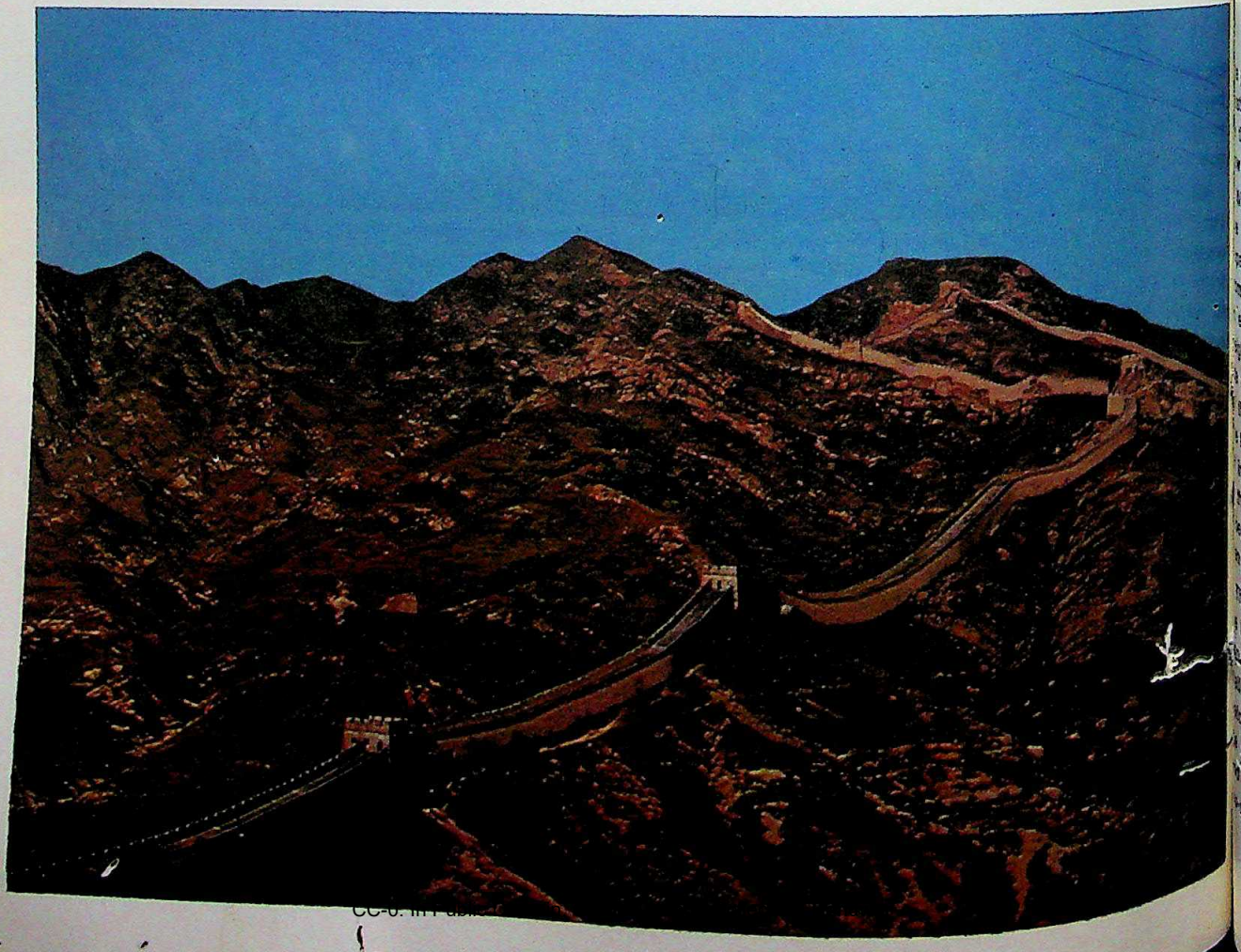


The Great Wall near Peking, and, below, at Zhang Jia Khou Pass, looking east.



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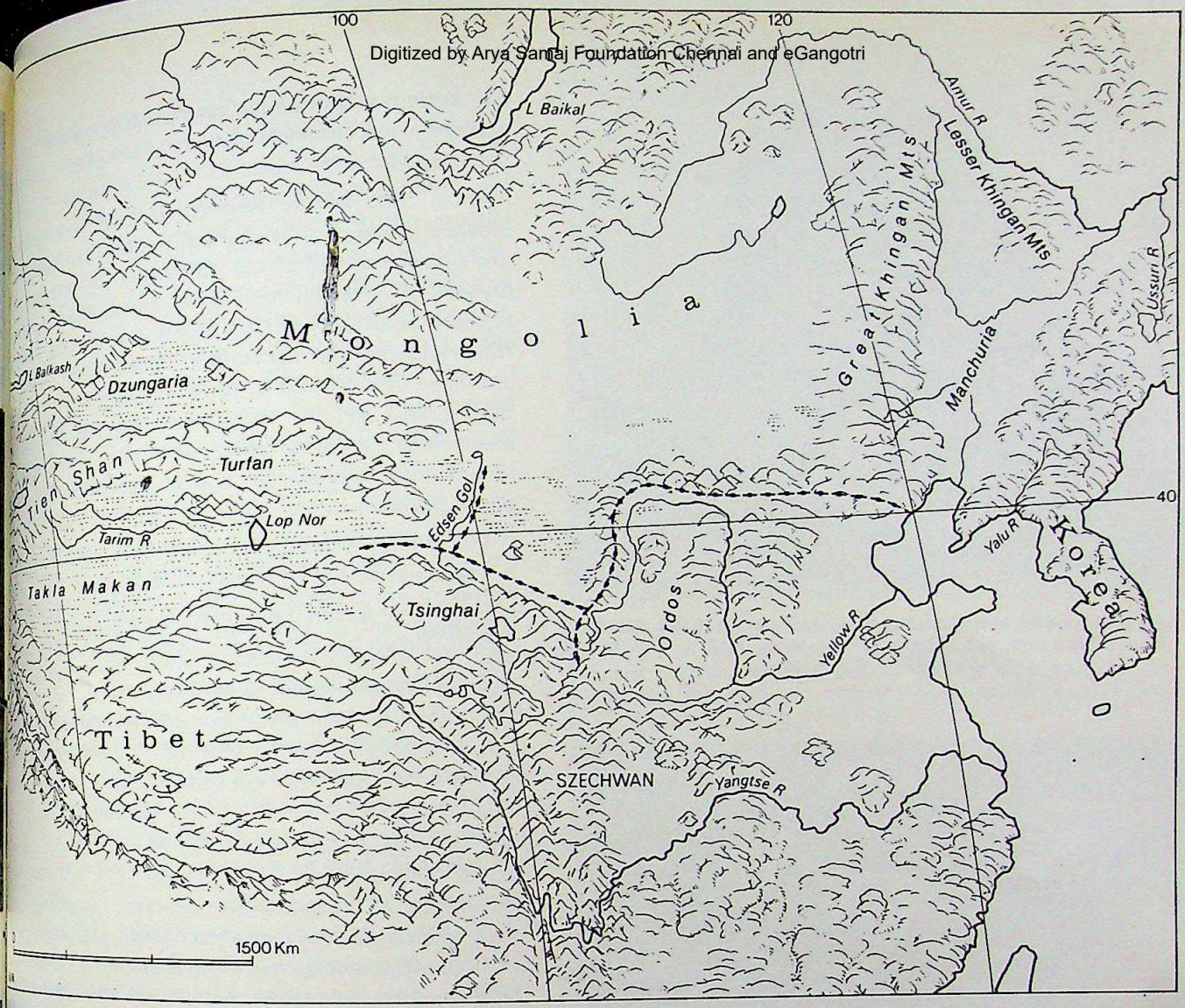

power of Qin a few years later, the advanced defence ...s had been overrun by the northern people known ...e Chinese as Xiong-nu, and the frontier of China ...w ran south of the Ordos.

...ith the accession of Emperor Wu of Han in 141 B.C., ... Chinese embarked upon a period of aggressive ...pansion, designed in part to counter a perceived threat ...m the Xiong-nu, but also, it seems in many cases, ... extend imperial influence and power against weaker ...ighbours of the south and west. In the early years of ...r reign, the armies of the empire recaptured the lands ...e northern loop of the Yellow River, and returned ... frontier to the old lines of Qin. In 121 B.C., as a result ...internal disagreement, the Xiong-nu ruler of the tribes ...e Kansu corridor, the territory between the massif of ...ien and the wilderness of the Gobi, surrendered to the ...n dynasty.

The armies of Emperor Wu occupied this territory, and ... borders of the empire now extended for the first time ...o the north-west. In the next twenty years, the Great ...ll was extended along this line, with frontier posts and ...watchtowers guarding the oasis cities of the corridor and ... caravan route against raiders from the north. By the ...end of the century, the commanderies of Dun-huang, ...-tuan, Zhang-ye and Wu-wei had been established, and the famous Jade Gate, the Yumen Pass, was established to control and supervise the passage of merchants and soldiers.

It was from this position in the north-west of China that the armies of Emperor Wu, guided by the records of his great explorer, Zhang Qian, extended their power over the oasis cities of the Silk Road. The culmination of their conquests came with the great raid upon the kingdom of Ferghana, beyond the Takla Makan, to bring back the famous 'blood-sweating' horses and improve the breeding stock of Chinese cavalry. But the Chinese interest in central Asia could not always be maintained in strength, and it was the Great Wall frontier of the empire which gave real security to their power.

All along that frontier, the wall was constructed of local materials, rammed earth reinforced by fascines of reed, sometimes, but certainly not always, faced with stone or brick. Though much of the original construction has disappeared, the line in the north-west was discovered and surveyed in the early years of this century by the remarkable British explorer Sir Aurel Stein, who travelled from India through Tibet and came to China from the west along the old Silk Road.[2] From his detailed maps and photographs it is possible to trace the lines of Han defence works on the ground, to observe the communica-

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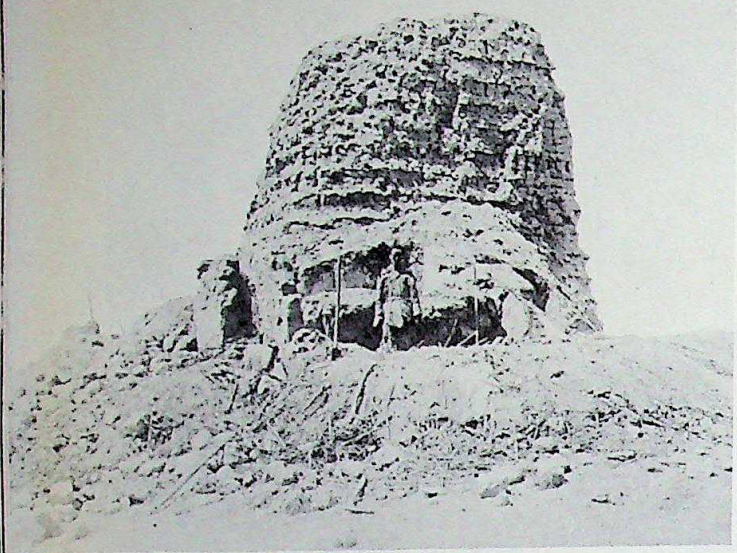
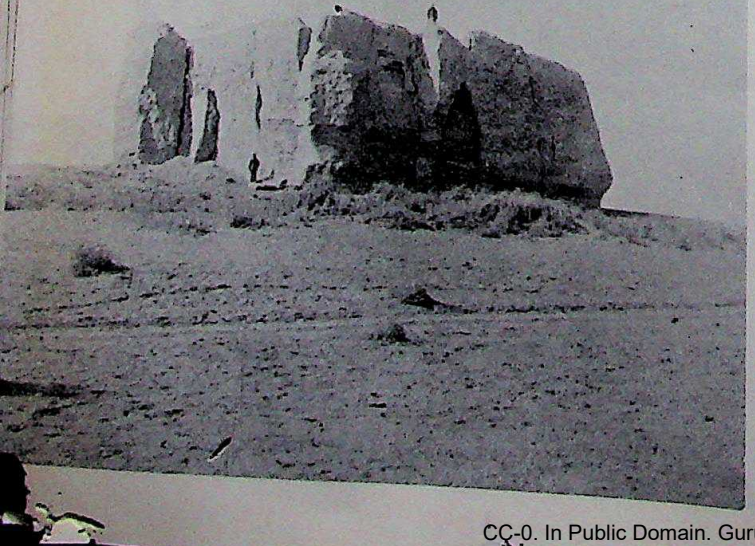


A ruined watch-tower on the Wall, showing its brick construction, and, below, the remains of the Great Wall of Han, in the north-west, in sand-dunes.

Ruins of the Jade Gate (Yumen) of Han, once the last station of the Chinese Empire on the Silk Road to the West.



tion system of the watchtowers, each manned by its tiny garrison, and to study the very records of the military administration.

Within and beside several ruins of watchtowers and defence posts, lightly buried by the sand and soil of two thousand years but preserved by the remarkable dryness of the climate, Stein found great numbers of bamboo strips with written orders and reports, passbooks, ration indents and accounts of inspections, all the paraphernalia of professional military government.[3] From these brief notes we can reconstruct the life and duties of servicemen, some of them short-term conscripts, some long-service veterans: the sort of men described in poems of the time:

I let my horse drink from a well by the Great Wall,
The water so cold it chills him to the bone. . . .

Better that a man die fighting hand to hand,
Rather than the misery of building this Great Wall?

Stretching on and on three thousand *li*;
On the frontier by the wall are many strong young men
And inland at their homes are many lonely wives.
I have sent a letter, back to Taiyuan:
'Take another husband and do not wait for me,
'Serve your new family as well as you may;
'Just think, from time to time, of former love.'

'Though I am caught in this misery,
'Why should I hinder someone else?
'If you bear a son, cast him out to die,
'If you have a daughter, her life will be fortune and pleasure,
'For she will never see this long Great Wall,
'With dead men's bones piled up in careless heaps.'[4]

For the most part, these garrisons along the wall were self-supporting. Much of the settlement was arranged by military colonies, where the men and their families grew their own provisions on land irrigated by canals drawn from the rivers which ran to the desert from the melting snows of the mountains in the south. At one point in the north-west, the Han government even extended a salient to the salt lakes of Edsen Gol, then a reasonably fertile region, with a line of wall to protect the farming settlement and its transport route to the other garrisons. North of China proper, frontier service was rather less isolated, but it was never easy or popular: labour on the wall was largely recruited from sentenced criminals, and it was an imperial regulation that the native-born citizens of a border commandery should never be allowed to settle away from the frontiers.

This, however, in the end brought the destruction of the Great Wall frontier. Throughout the Han period, despite the policies and regulations of the government, there was a steady migration of population from the harsh lands and climate of the north to the colonisation of the distant south. Indeed, for thirty years, from the 'forties to the 'seventies A.D., the forward positions on the Great Wall were actually abandoned. Although they

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later re-occupied, by the second century A.D. the tion of some northern territories was no more than n of its former count. The Great Wall had held out emy, but it could not maintain a defence line when was no reserve behind to support the frontier ons. In a series of internal rebellions and frontier ons, the power of the empire in the north and west was broken and the Han dynasty itself was ably weakened. In the third century A.D., the e was divided into three rival kingdoms, and a ed years later a non-Chinese nomad state seized ncient capitals of Han and dominated the land as far as the Yangtse.

en China regained its unity three hundred years the modern Great Wall, built by the Ming dynasty, ed a renewed revival of Chinese power after the uest and occupation by the Mongols in the thirteenth fourteenth centuries. It was only in the eighteenth ry, in the time of the Qianlong Emperor of Qing, the power of the northern nomads was broken and ed between the expanding forces of China and rial Russia. After all the battles and strategy of ed peoples and nomads, the farmers had won the against the herdsmen.

or the classical and mediaeval West, the Wall was more than a legend, but it is arguable that it had more practical effect on their history. According to e scholars, the Xiong-nu of the Chinese frontier were ancestors of the Huns who served Attila. Though the al identification is tenuous, it is certainly possible the great barbarian invasions which destroyed the ed world of Rome may have gained their original tus from the pressure of populous tribes which were ented from expanding south into China by the barrier the Wall. Even if the Great Wall of Qin and Han was mately subverted and overrun, its successful defence four hundred years gives fair evidence of its practical ue, and the record of Chinese arms on that bleak and dle frontier compares well with that of the legions of me.

Rafe de Crespigny is a Reader in the Department of Chinese the Australian National University, Canberra.

ES:

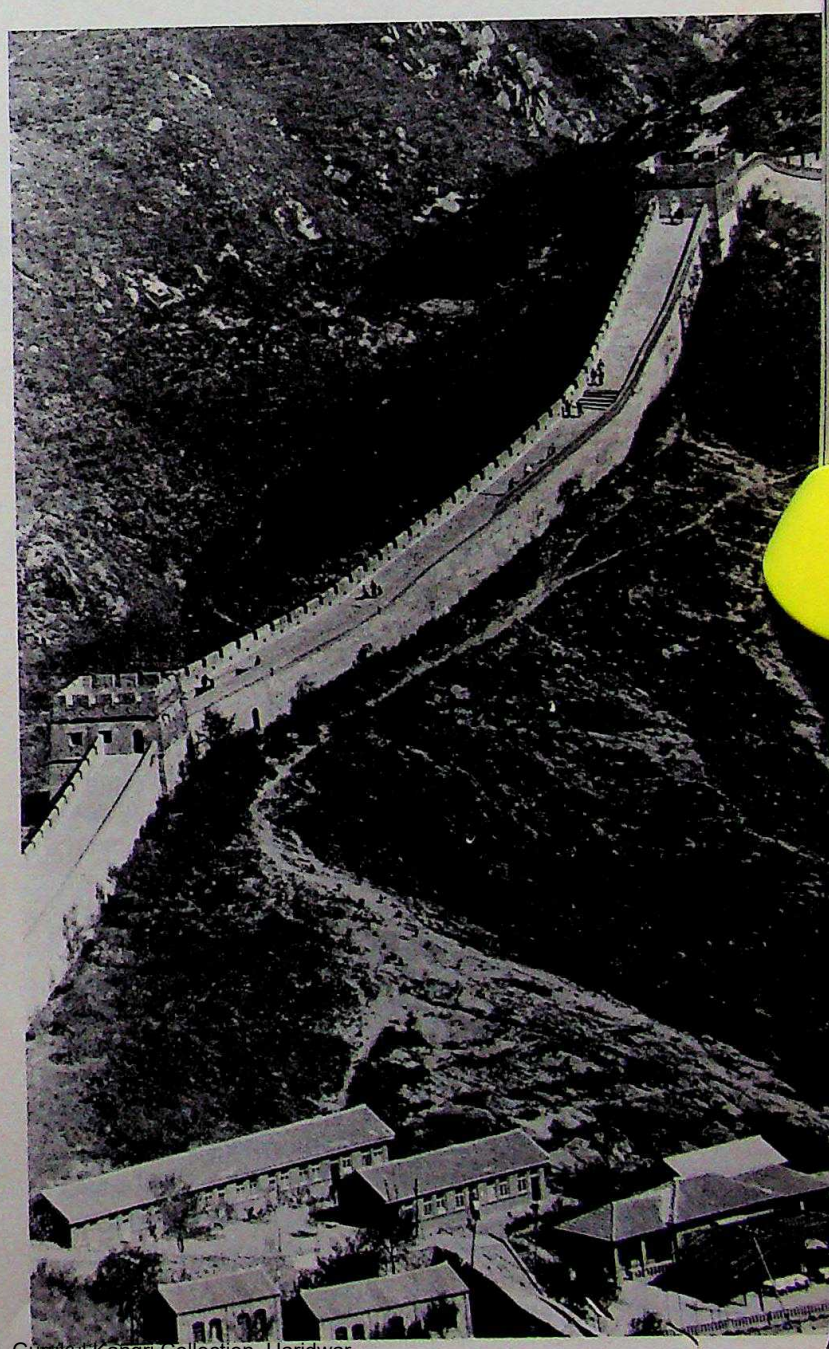
From the *Shi ji* of Si-ma Qian, c. 100 B.C., following the translation by Burton Watson, *Records of the Grand Historian of China*, Columbia U.P., 1961, II, 160.

For Sir Aurel Stein's account of his travels, see *Ruins of Desert Cathay*, 2 volumes, London 1912; the Han wall in the north-west is traced in his end-maps.

The strips recovered by Stein were translated and discussed by Edouard Chavannes in a volume published at Oxford in 1913. Further strips were discovered by Swedish expeditions conducted by Sven Hedin and Folke Bergman and others between 1927 and 1934 in the region of Edsen Gol, and a major survey of this material has been published by Michael Loewe, *Records of Han Administration*, 2 volumes, Cambridge, 1965.

From Chen Lin, 'Watering the horses at the wells by the Great Wall', *cf.* the translation by Burton Watson, *Chinese Lyricism*, Columbia, 1971, pp. 56-57.

A watch-tower on the Great Wall of Han in the north-west, guarding the road to central Asia; below, part of the reconstructed Wall not far from Peking. (Photographs courtesy the author, Adrian Sever and from the books of Sir Aurel Stein).



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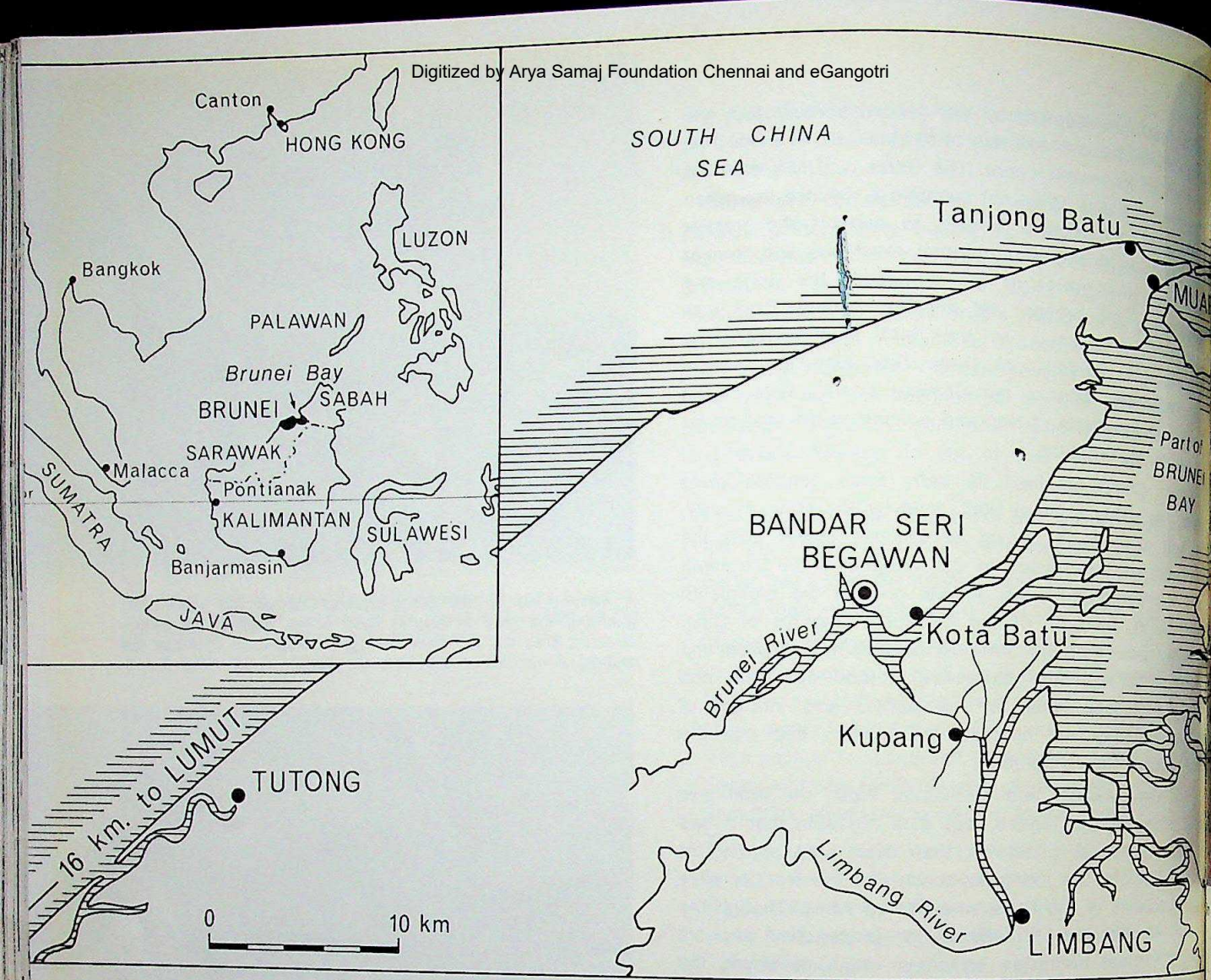

THE SULTANATE OF BRUNEI

Peter Bellwood

BRUNEI today faces the world as a small Moslem sultanate on the north-western coast of Borneo. Rich in oil and in Islamic tradition, its people present to the visitor an air of proud dignity, backed by a strong cultural tradition, and, in more practical terms, the highest per capita income in South-East Asia. The present sultan, Sir Muda Hassanal Bolkiah, is the heir to a royal line which goes back at least to the fifteenth century. His one hundred and ninety thousand subjects are ruled from the capital town of Bandar Seri Begawan on the Brunei River. This town is quite unique, for most of its inhabitants live in extensive suburbs collectively called *Kampong Ayer* (Water Village), with houses in modern style built on stilts along both sides of the quiet tidal river. The main government and business centre is focused on a magnificent mosque, the largest in South-East Asia, which stands as a monument to the success of Islam in this region.

Most of Brunei is still densely forested; an unchanging part of the torrid and primeval Borneo scene. The population, now as always, lives along the coasts and rivers, always within sight of the great carpet of jungle. The modernisation of Brunei, due in the main to oil revenues combined with the expertise provided by a sizeable British expatriate community, is a recent phenomenon; Brunei has been under British protection since 1906. In the six or more centuries prior to 1800, the sultanate rose to its peak of power in South-East Asia and then declined, being finally reduced to its present size in the nineteenth century by the expansive Brooke Rajahs in Sarawak and the British North Borneo Company in what is now Sabah. Its history prior to 1650 seems to have been much more inspiring, to judge from contemporary Portuguese and Spanish accounts. Brunei once ruled and exacted tribute

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Aerial view of Bandar Seri Begawan. The mosque is in the centre, and Kampong Ayer (Water Village) in the foreground. (Photograph courtesy York Camera Colour Laboratory, Bandar Seri Begawan.)

roughout the whole of northern Borneo and the southern Philippines.

The most exciting description of Brunei in its hey-day was written by Antonio Pigafetta, a survivor of Magellan's expedition around the world. He visited Brunei in July 1521, and tells how the Spanish ship was visited by boats with bows and sterns decorated with gold. After an exchange of gifts, the Spaniards were taken ashore, where they slept on cotton mattresses from Cambay before being taken mounted on elephants with silk trappings to the sultan. At the palace they entered a hall full of many pillars. The walls were adorned with silk hangings. Beyond this was another hall with three hundred armed officers to guard the sultan, who sat secluded in a third room with his son and several women. The Spaniards were not allowed to speak to the sultan, and their request (for permission to trade) was passed via two separate Bruneian nobles, through a speaking tube in the wall of the sultan's room, to a person inside with him who finally transmitted the message. The sultan gave his permission, the Spaniards clasped and kissed their hands in the accustomed obeisance, and the two parties exchanged gifts. Pigafetta's description leaves no doubt about the wealth of the Brunei court. Gold, silk, precious stones, porcelains, and fine food and rice wine were clearly in plentiful supply, and the palace itself was defended by a brick wall with towers supporting fifty-six bronze and six iron cannon. The townspeople, as today, lived in wooden houses built on piles over the river. By this time, the sultan and his court had been converted to Islam, and scribes were employed to write down the court records, presumably in Malay, on tree bark. Unfortunately none of these records have survived.

Sixteenth century Brunei was a small centralised state which derived its wealth from trade and tribute; it was not a geographically unified empire in the European sense. Much of the trade was carried out through sailing voyages by monsoon winds to Malacca, with the main Brunei exports recorded as camphor, gold, wax, honey, rice and sago. Imports included Indian cotton and woollen cloth, beads, and Chinese ceramics and silk.

By 1521 the sultanate was also exacting tribute from a varied mixture of tribal and Moslem populations all the way from the Kapuas River in north-western Kalimantan into the islands of the southern Philippines. Outlying districts were governed by Brunei nobles, and the governor of Palawan in the southern Philippines was actually captured by Pigafetta in 1521, but released after an exchange of gifts. According to eighteenth century records, the sultan himself ruled over a court of four chief ministers (possibly only two in the sixteenth century) and a

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The golden hoard of Limbang, found in 1899 and now in the Brunei Museum. (Photograph by the author.)

hierarchy of officials, many from the noble class. These government officials were entitled to taxes from some of the districts under Brunei control, while a number of other districts were controlled by nobles with no attachments to the government. The geographical distribution of control by the sultanate itself was therefore somewhat patchy, and Pigafetta even mentioned a rival non-Moslem city located somewhere in Brunei Bay in 1521.

The Brunei control over outlying districts was also attended by the propagation of Islam. This led to far-reaching consequences. In 1578 the Spaniards issued an ultimatum to the sultan to cease Moslem propagation in Luzon and the southern Philippines, and the capital was occupied by Spanish troops. After another attack in 1644 Brunei finally entered a decline which continued until its territories were absorbed into the British territories of Sarawak and North Borneo in the nineteenth century. Piracy ruled supreme along the shores of the South China Sea until the intervention of James Brooke in 1839; his reward was to be made Rajah of Sarawak in 1841. The reduction of Brunei territory began in earnest.

However, it is the rise of Brunei rather than its decline which is perhaps of more interest. For here we enter the world of Borneo prehistory, with only occasional illumina-tions from Chinese sources. In 631, 977, and 1082 A.D. Chinese records refer to deputations and tribute from a place called Po-ni or Po-li, equated on rather insecure grounds with Brunei. Archaeological sites in Brunei have now produced so many Chinese ceramics dating from between the twelfth and sixteenth centuries A.D. that visits by Chinese traders are almost a certainty, and recently a Chinese tombstone dating to 1264 A.D. has been found in a graveyard near Bandar Seri Begawan. In Brunei tradition the second ruler, in the present royal line, who presumably lived in the fifteenth century, married a visiting Chinese woman of high rank. So China, quite clearly, had some relations with Brunei in the pre-Islamic period, and it is most likely that a centralised kingdom able to attract wealth and trade from afar was already developing in Brunei as early as the twelfth century. A degree of influence from the Indianised kingdoms of Malaya, Sumatra or Java is also highly probable, as witnessed by a statue of the Hindu elephant god Ganesa and a remarkable hoard of goldwork, found at Limbang. The gold objects are considered to be of Hindu-Buddhist inspiration or origin, and may date from the thirteenth or fourteenth century.

None of this wealth would have flowed into Brunei had there been no central authority to attract and protect the necessary traders. Most of Borneo, of course, still re-

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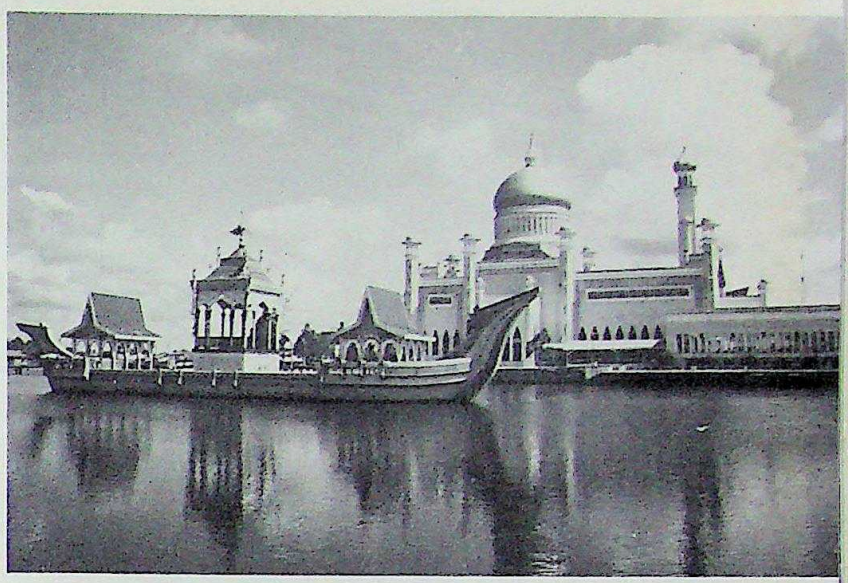
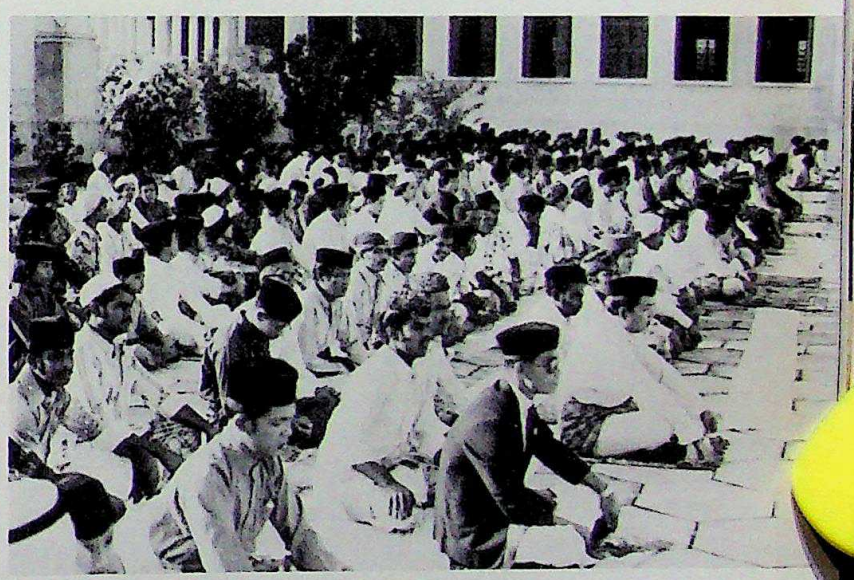
ad tribal, as much of it does to this day. But in ted coastal locations such as Brunei, Pontianak and rmasin, trading kingdoms must surely have been ablished prior to the spread of Moslem propagation 1450. The archaeology of Brunei alone would ast this, and when Ludovico Varthema gave the first unt of Brunei in 1505 regular trade with Malacca already under way, although the ruler of Brunei at time was described as a pagan. It is possible that y-speaking merchants from Malacca had already duced the Malay language into Brunei by this time e native languages of Brunei being only remotely ted to Malay — and the fall of Malacca to the Portu- se in 1511 may have led to the actual settlement of acan refugees. Many of these Malaccan Malays were now Moslems, and by 1515 the ruler of Brunei is cribed as a recently-converted Moslem himself.

oday, Malay is the official language of Brunei, but its oduction is recent, as I have indicated above, and Brunei Malay population itself is derived from the nal tribal populations ('Dayaks') who inhabited the ntry prior to 1500. The Malay language and Islam e become the major foci of Brunei ethnic identity n only the last four hundred and fifty years.

hat of archaeology in Brunei? In 1970, the magnificent ei Museum was opened at Kota Batu, on part of the of an ancient artificially terraced town running down slope to the mangroves of the Brunei River. This ced site is believed to have been that of the town ed by Pigafetta in 1521, and excavations by Tom and ra Harrisson in the early 1950's produced enormous ities of Chinese and Thai pottery, local earthenware, ese coins, and objects of wood and metal dating to een approximately 1380 and 1580. The site was doned soon after 1600 during the period of hostility the Spanish, but it was clearly one of the major ments of Brunei during the period of the rising g kingdom and its final conversion to Islam. The ced house platforms visible now cover an area of two and a half hectares, but from Pigafetta's account was only the elite centre, and the bulk of the itants lived in houses built over the river. Coherent s of these, apart from broken potsherds embedded ep estuarine mud, may never be found.

December 1977 and January 1978 further archaeo- work was carried out in Brunei, by a party from nei Museum under the direction of Matussin bin urator of Archaeology, and myself, from the ah National University. Our first excavation was t out in a village called Kupang, on the bank of Sungai Mendaun, between the Brunei and ers. Here, we found layers of debris from a occupied on a fairly continuous basis since s 1100. The earliest material comprised quantities rds from glazed vessels made in southern China the Southern Sung dynasty (1127-1279). Many vessels have recently been found in good con-





Above: The Masjid Omar Ali Saifuddin, with the Royal Barge in the foreground; below: Brunei Muslims at prayer in the courtyard of the mosque; bottom: The Brunei Museum, opened in 1970, houses extensive collections including ethnography, archaeology, natural history, Chinese ceramics and Brunei brassware. (Photographs courtesy Brunei Museum.)

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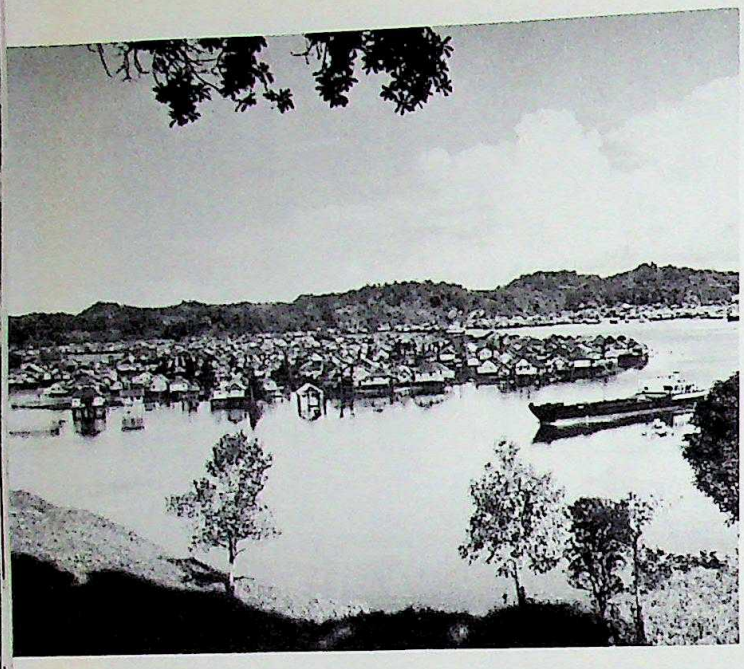

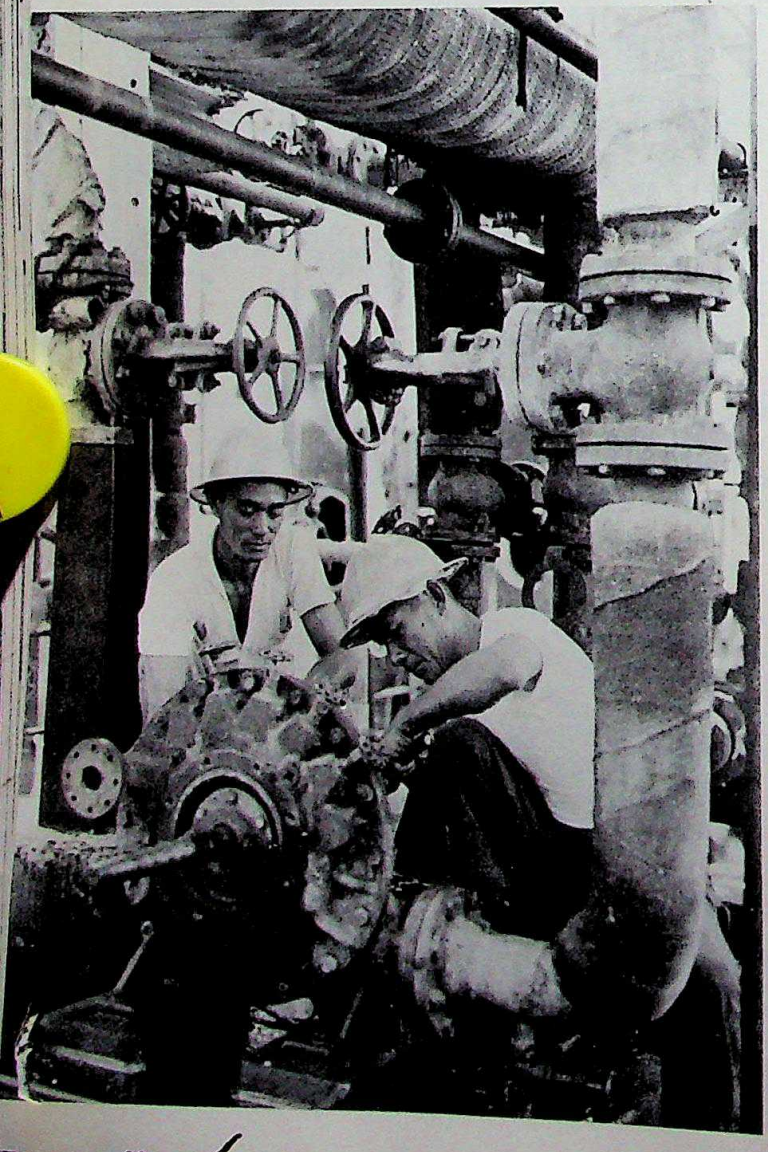

Above: Kampong Ayer is a part of Brunei town; below: oilfield workers at Seria. (Photographs by Hedda Morrison.)

dition washed up on the beach of Tanjong Batu near the port of Muara, and these may have actually been the cargo of a wrecked trading vessel of this period. Whether these pots were imported direct from South China, or via intermediate ports in Malaya or the northern Philippines, we have no way of knowing.

Kupang was obviously a large village contemporary with the major period of settlement at Kota Batu. Surface finds in other parts of Brunei indicate that many other settlements were occupied at this time, all perhaps increasing their living standards through the lucrative trade being channelled up the Brunei River from Brunei Bay. Chinese wares are found in such numbers that they were clearly regarded as expendable everyday objects, and not, except for very fine large jars, as being of any special value.

Our other excavation, near the mouth of the Lumut River on the Brunei coast, gave a rather different picture of Brunei life on the eve of Islam. Here, for reasons at present unknown, people had buried clusters of broken pots, many of early Ming blue-and-white varieties (fifteenth century), together with glass beads and metal objects, in small scoops dug into the top of a sand dune. No-one ever lived on this site, and no burials were found; clearly it was visited for ritual purposes, perhaps for making offerings to spirits. The religion of Brunei at that time doubtless resembled the tribal pagan religions which still survive in remote interior areas today.

In addition to the overwhelming evidence for trade with China after 1100 (or possibly before according to some scholars), we also found that local earthenwares were being made to similar designs over all the coastal regions of Sarawak and Brunei at the same time. Perhaps these were being traded too; large storage jars with paddle-impressed exteriors and handled lids appear to have been the most widespread forms. Similar vessels have been found in excavations in Hong Kong, perhaps containers for the exports coming out of Borneo.

In the past, western historians have given the impression that those islands off the coasts of South-East Asia which lie beyond the centres of Hindu-Buddhist culture in Java and Sumatra were first introduced to civilisation after the mid-fifteenth century by Moslem traders searching for spices. This may still be partly true, but it is clearly not true for Brunei. The Islamic tradition has had a major impact on the development of the Brunei sultanate, but its cultural origins go back perhaps centuries before conversion took place in this part of Borneo. The rise of centralised society in Brunei was no doubt connected with the increasing Chinese trade to southern regions during the Southern Sung dynasty, but the exact mechanisms of change will only be illuminated by further archaeological research.

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e: Fishing in the tidal waters around Kampong Ayer; below: traditional methods of the Kampong silversmiths being watched by younger eyes. (Photographs by Hedda Morrison.)

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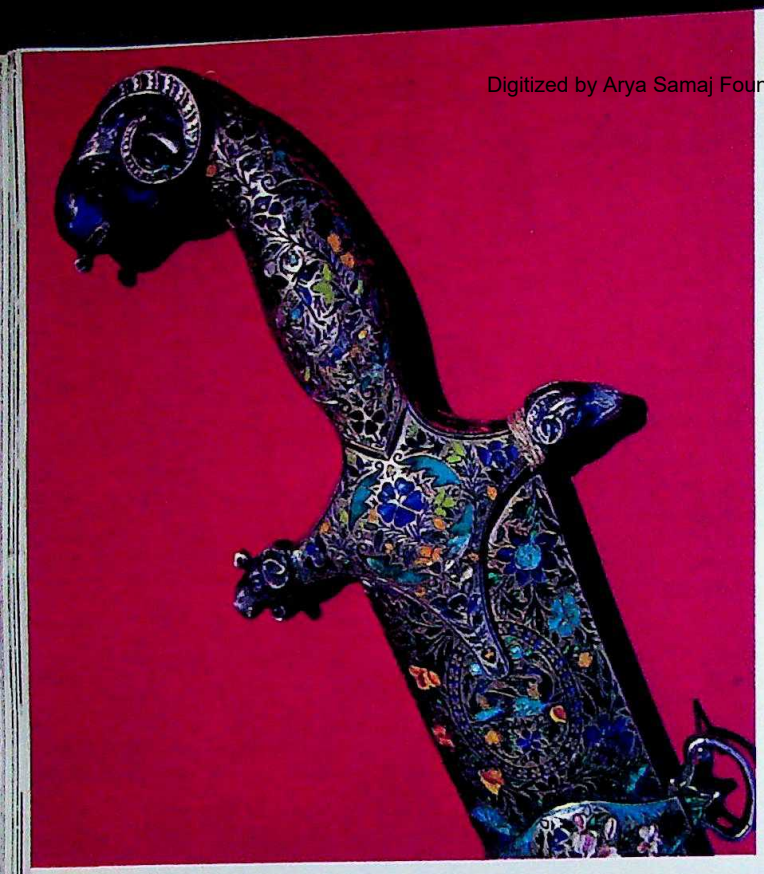

'AND SPLENDI TH S

Above: Left, a sword hilt in the form of a ram's head; right, an eighteenth-century shield, edged with formalised landscapes. Below: A 'scissors-sword'—not so much a sword as a primitive form of Indian guillotine. This one, forged in the early sixteenth century, is the only example of its kind, as far as is known. Right, a jamadhar, *or push-dagger of the period of the Emperor Jehangir. The sheath is of ivory, decorated with gold. Inside the sheath is poison for the three knives that can be seen at the top of the sheath. The handles of the dagger are decorated with gold wire.*

THE MUGHALS achieved renown as swordsmen when in the early sixteenth century Babur arrived in northern India with a small following of warriors and carved out a mighty empire. The sword became the Mughal symbol of victory. Later, when the conquests had been secured, Babur's descendants took great pride in embellishing their swords with precious metals and stones, and in constructing great monuments, of which the Taj Mahal built by Shah Jahan, fifth emperor (1628-1658) of the Mughal dynasty, is the best known.

To the Mughals the sword was something more than a mere weapon. What a man did with his sword was a

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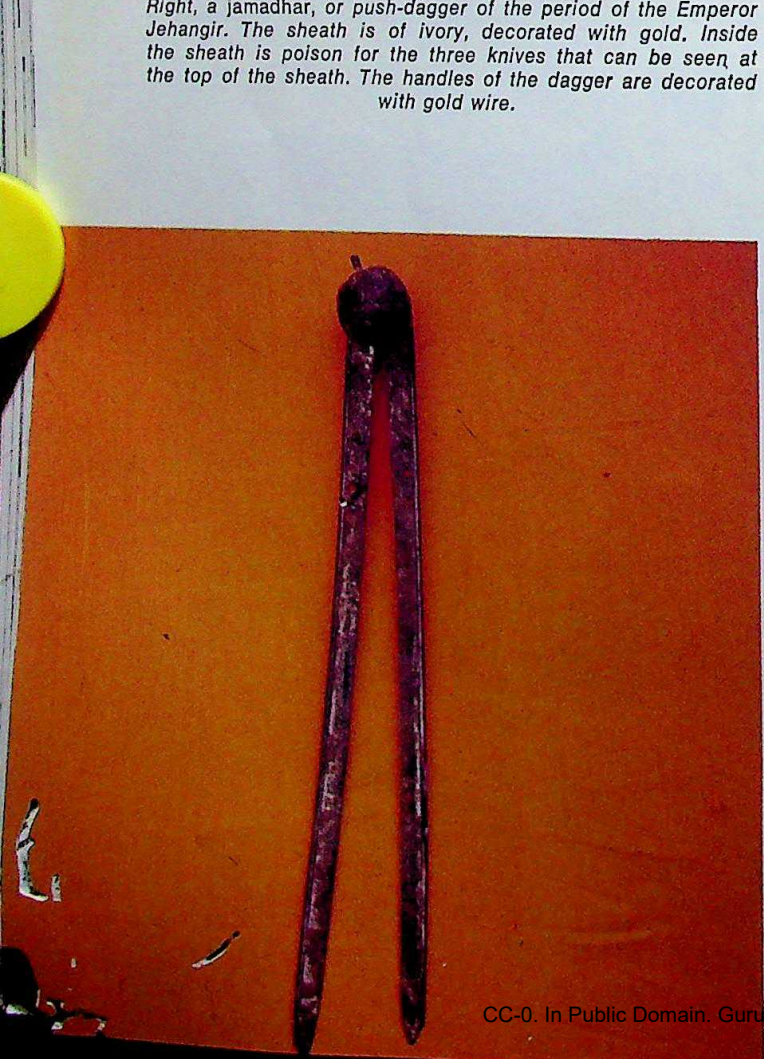

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ENDITH SWORDS'

V. P. Dwivedi

rdsmen when ter of great personal significance; matters of power
d in northern prestige were involved. The highest honour a man
carved out a d expect was to be presented with a sword by the
nal symbol of peror.

een secured. words were of course known in India long before the
embellishing ghals arrived. Ancient Hindu terms for the sword were
ones, and in khadga, *visamana*, *vijaya*. However, the Indian warriors
he Taj Mahal he ancient period, who fought from chariots and the
1658) of tha ks of elephants, relied more on bows and arrows and
ears than on the sword, which was a weapon that horse-
more than a en could use more effectively. The Mughals went into
sword was a ncat on horseback and during their period of rule sword-

Above: The ivory handle of a dagger. The inscription indicates that the portraits are those of a king and queen and the influence is obviously Persian. Left, an embossed metal shield of the Mughal period. Below, a dagger from the period of Shah Jehan (ca. 1650). The blade is of steel, engraved with verses from the Koran; the hilt, of the 'Delhishahi' design, is of ivory, engraved in black enamel. Left, two daggers which belonged to the Mughal Emperor, Aurangzeb. The upper one is inscribed with his name in gold. Beneath it is another one belonging to the Emperor, with the hilt missing; its blade is of watered steel, inscribed with the name Alamgir, a title — it means Conqueror of the World — assumed by the Emperor. The wooden sheath is covered in velvet and its fittings are of silver and enamel.

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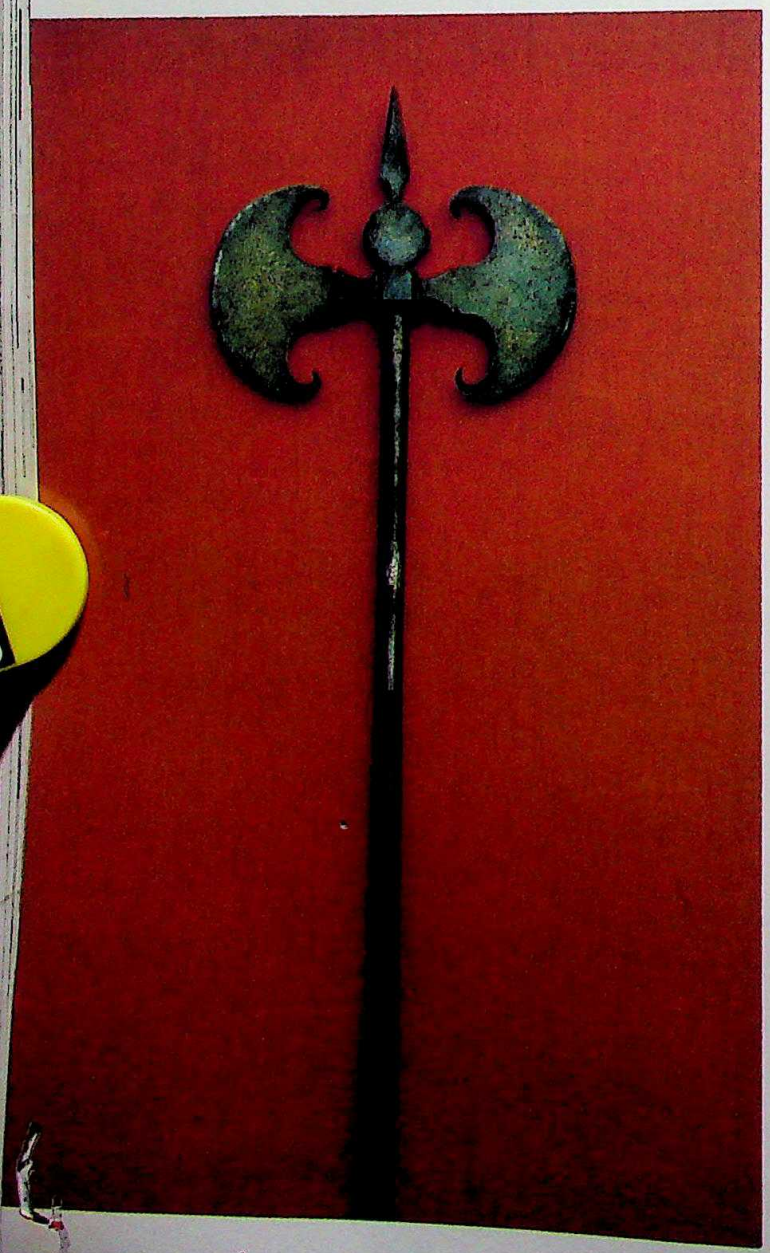
making and swordsmanship reached a high point in India. Special skills were imported from Persia, including the art of damascening, that is, using diluted acid in order to wash the sword blade and decorate it with a pattern. Many Mughal blades that have been preserved to this day bear the name of Assadullah of Isfahan. However, by the end of the seventeenth century, Indian swordsmiths had learned at least some of the Persian techniques. Thus the Mughals gave a new impetus to an old Indian craft.

Two types of standard sixteenth century Persian sword are represented in the Humzah Namah paintings, the earliest surviving works of Mughal art. One type has a slightly curved back blade with broad tip, the other a scimitar blade curved backward. Both types are single-edged, though the reverse edge is usually sharpened a few inches from the tip. Other types of sword that developed in Mughal India are *Sosum Pattah* (meaning lily leaf), so called because the edge and reverse edge of the blade show smooth recurves; the *talwar*, which had a shallow curve and broad, heavy tip; the *tegha*, which had a deeply curved, tapering blade.

The double-bladed battle-axe, known as tabar, *used in close combat until 1739, when Nadir Shah of Persia invaded the country.*



The *Sosum Pattah* does not appear in Mughal paintings and is known to us only from extant examples. Indian swordsmanship does not appear to have made use of the point. A stabbing method of sword fighting appears to have been practised in early times, but with the development of longer blades, partly no doubt for use from horseback, Indian swordsmanship appears to have developed in the direction of purely cutting strokes combined with acrobatic avoidance devices.

The changes in sword design illuminate fascinating aspects of Mughal history. Swords of the early Mughal period, that is, the period of conquest, were designed primarily for cutting rather than for parrying or guarding. We note this from the curve of the blade and the distribution of the weight of the metal in relation to the part intended to take the weight of a blow struck with great force. The development in the seventeenth century of the sword with a tapering blade, and its increasing use, indicates that pursuits other than war had begun to interest the Mughals. The tapered blade cannot stand up to heavy use. It is most likely therefore that these swords were used in the hunt. We know from several records of the period that hunting had become a popular pastime of the wealthy Mughals. After the emperor Aurangzeb (1658-1707), Mughal power began to decline, the sword-smith shifted his attention from blade design to lavish decoration of the hilt.

Decorated hilts had of course been a feature of the early swords too; there was scope for the swordsmith to show his skill both as blade designer and as artist. The sameness of the hilt designs seen on swords from the mid-seventeenth century is again evidence of Mughal decline.

Hilt design and décor give a good idea of when the sword was probably made. Early designs were simple and elegant. By the mid-eighteenth century they had become elaborate, and in the eighteenth century the diamond pattern was repeated on most hilts. The more interesting motifs of the second phase show an elephant strangling a lion, a lion's head. Damascening, chiselling and enamelling were the techniques used to decorate sword blades. Scroll ornaments with gold wire inlay are found on some blades.

The increasing use of guns in wars with the British in the late eighteenth century ended the Indian swordsmith's craft.

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All photographs by Darshan Lall, done with the co-operation and courtesy of the National Museum Arms Department, New Delhi.

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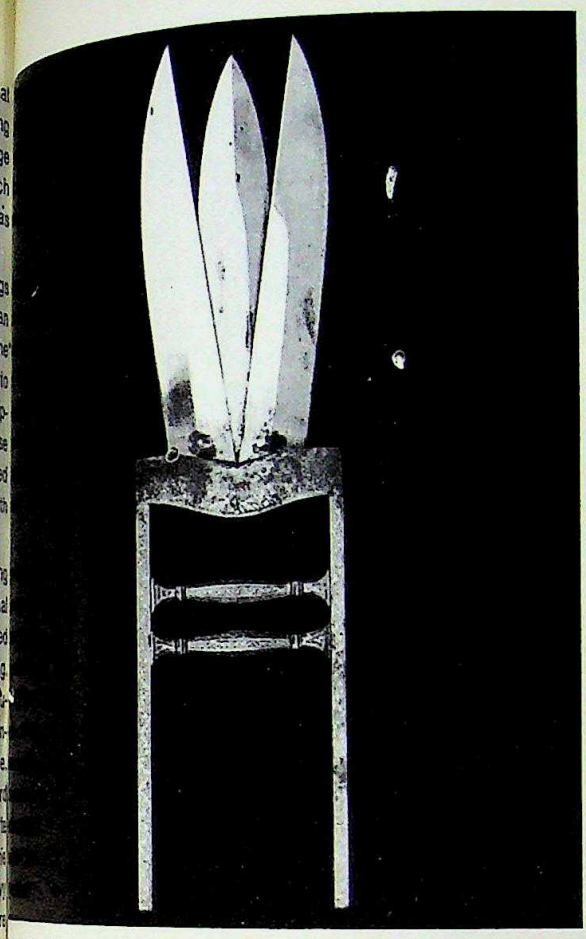
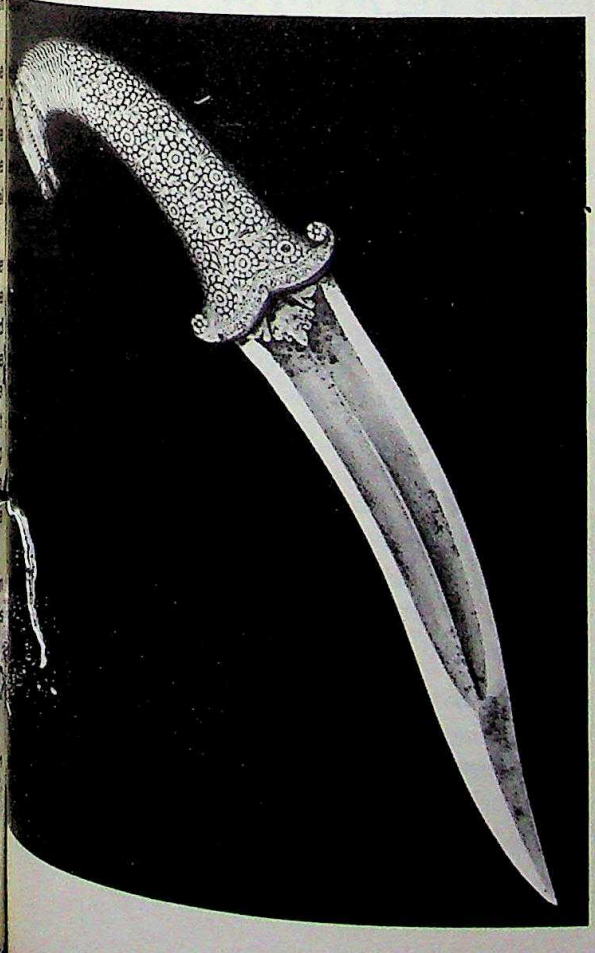
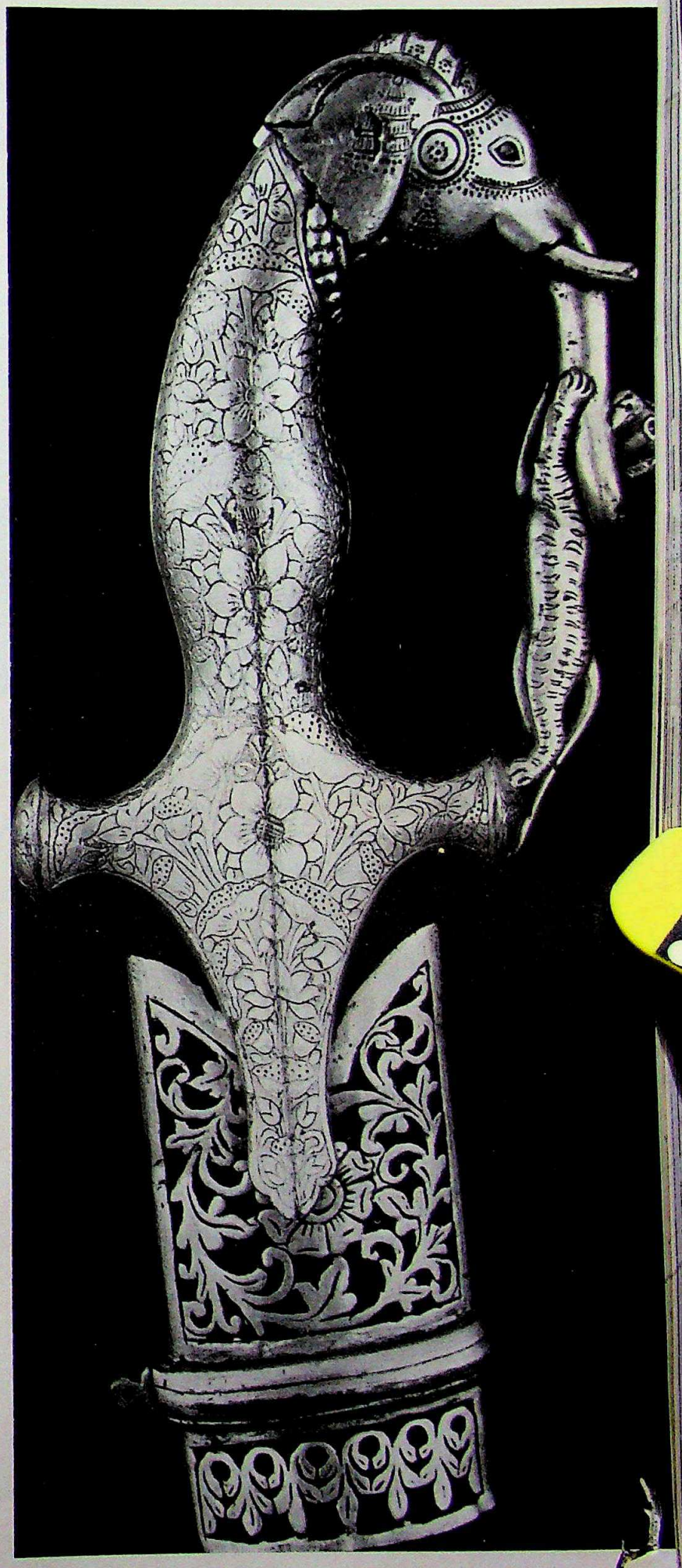


Above: A dagger called jamdhar, *with three blades operated by a spring so that they separated inside the opponent's body; below, a dagger with a gilded hilt decorated with the head of a horse; right, a hilt decorated with the head of an elephant strangling a tiger.*





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A view of the converted shop that has become The Shopfront Theatre. *(All photographs A.I.S.).*

SHOPFRONT THEATRE

Gail Hols

DRIVING out of Sydney along the Princes Highway, the Western suburbs all look much the same: ugly, flat, cluttered with used car yards and billboards. The only thing which distinguishes Carlton from the adjoining suburbs is the luxurious headquarters of the St. George Leagues Football Club. Nothing encourages you to turn off the highway or to consider how the inhabitants of Carlton spend their time. It is easy enough to guess that the adults work and watch television, with an hour or two at the pub to satisfy their social needs; that the children go reluctantly to school and look for ways to avoid the boredom of suburban life. If they are good at sports, there are places to play them and clubs to encourage their talents. If they are imaginative, creative children, what is there for them to do from four o'clock in the afternoon until they go to bed? There is home, with television and tired parents, or there is the corner telephone booth to decorate. There is also one of the most unusual facilities for children in Australia: the Shopfront Theatre.

The Shopfront Theatre was started by Errol Bray and Gary Fry after they had spent years trying to organise children's theatre in schools, church halls and regular theatres. They found that they were faced with the constant problems of inadequate space and rehearsal time. If a theatre allowed the children to use its facilities they knew that they could be turned out at a moment's notice. If they hired a church hall, they often had to stop their activities just when the children were most enthusiastic. The Hurstville Council allowed Bray and Fry to use a building which had been a telegraph pole depot and for eight months the 'Pole Depot Theatre' flourished, but it was soon too small for the multiple activities which the organisers envisaged. They moved to a cottage in nearby Kingsgrove for a few months but there were constant battles with the local Council over the by-laws of some of the young people who used the theatre premises and Bray and Fry decided to move again.

In March 1977 they found an old building by the railway line at Carlton. It had been used as an engineering works and had been converted from two old shops and a house. It was a long way from the centre of Sydney, but there were a lot of advantages. For one thing there was ample space for a proper theatre as well as for workshops and rehearsal rooms. The neigh-

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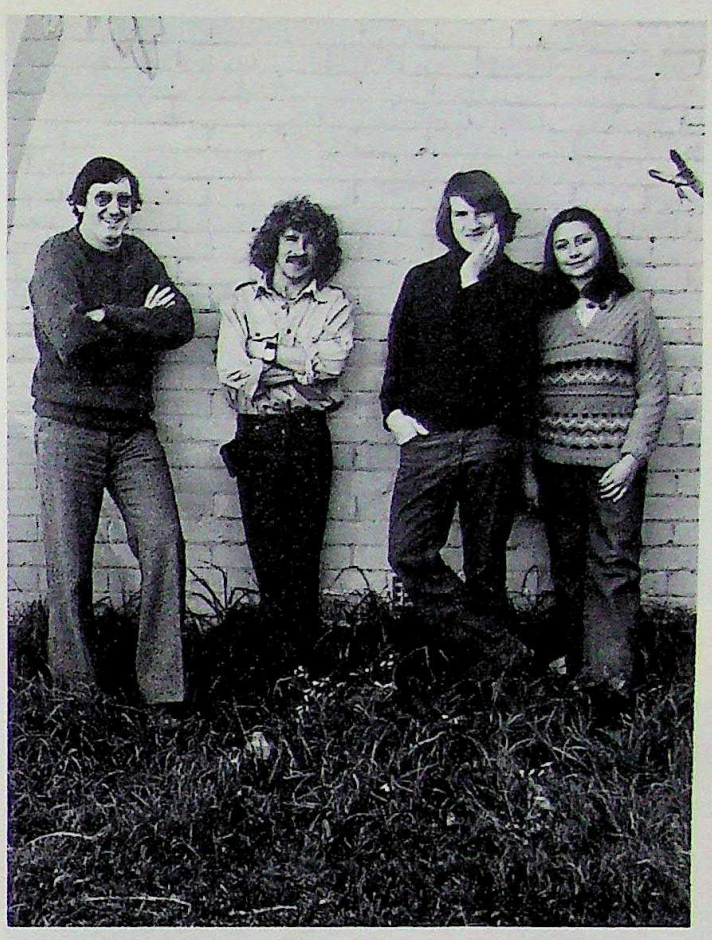
...ood was quiet, and there was very little for children ...o in their free time. Financed by the Theatre Board ...e Australia Council and by the State Government, ...Shopfront Theatre began operating as a unique ...ment in children's theatre. With only three staff ...bers, the premises were kept open to children when- ...they wanted to come. Most of the equipment was ...ated and children helped with the alterations to the ...ding, but the financial problems continued. The ...ts were insufficient to cover staffing and rent, and ...e energetic attempts at fund-raising by the children ...selves, the Shopfront Theatre is in danger of closing ...n.

I went down to visit the Shopfront Theatre at one of ...busiest times — on Saturday morning. The staff were ...busy with rehearsals to show me around, so the ...ren who were not involved in a play took me from ...m to room, explaining what was happening. In the ...yard two young people were helping to construct ...let. Fourteen-year-old Robert explained why. 'We ...n't allowed to charge for performances unless we ...e a toilet, so we're building this as fast as we can. ...see, we need fifty thousand dollars to buy the ...ding or else they'll throw us out.' I discovered that ...Shopfront is behind on its rental and that the ...ren recently staged a costume parade through the ...ets of Sydney to raise funds for the purchase of the ...ding.

...hat impresses the visitor to the Shopfront Theatre ...is that the children obviously regard the theatre as ...own property. They come and go as they please. ...ey want to, they can paint a wall pink or use one of ...rooms for almost any creative activity connected with ...theatre. In the beginning they were taught to do ...gs. Now they organise most of the activities them- ...es. They make their own shadow puppets, run their ...radio station, operate their own videotape cameras. ...of the older boys who is interested in lighting teaches ...r children how to operate a theatre switchboard. ...staff give advice, direct rehearsals, and talk to the ...ren about their ideas, but it is the children's theatre, ...they seem to be very aware of its value. 'You tell ...ple they should support the Shopfront Theatre,' said ...irl. 'It gives us the chance to express our ideas and ...ey don't give us some money we won't be able to ...here.'

...children took me to the area at the back of the ...which is used as the theatre. It is a large, high ...room with a stage in one corner and seating ...hundred people arranged around three sides ...We sat in semi-darkness watching Errol Bray take ...young actors and actresses through the action of ...new show, 'Playground Replay'. 'We did a show ...t "The Playground" last year,' Robert explained to ...and it was very successful. This is a new play based ...the same ideas. It's a sort of children's liberation



The staff of the theatre: Errol Bray, Rob Simpson, Michael Webb and Faye Westwood; Errol Bray and Faye Westwood look over a script.

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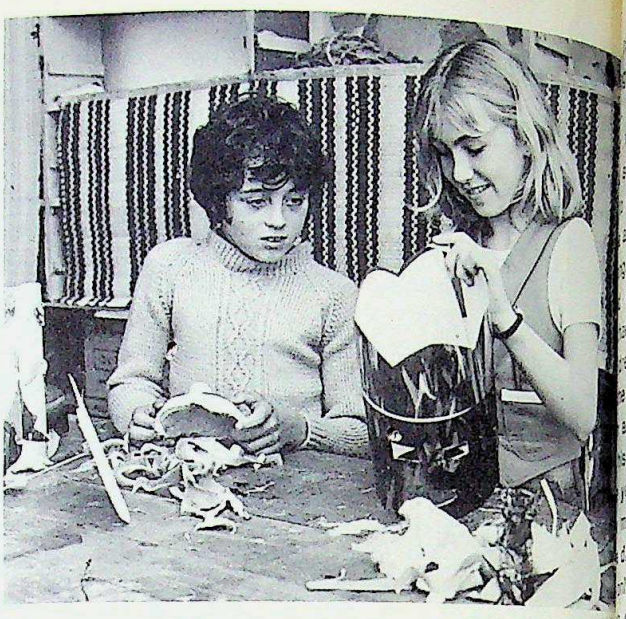
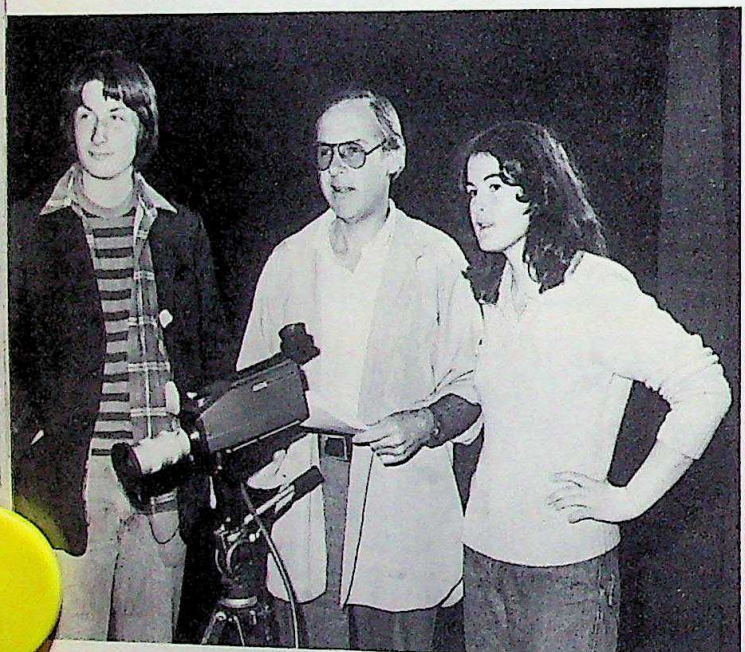
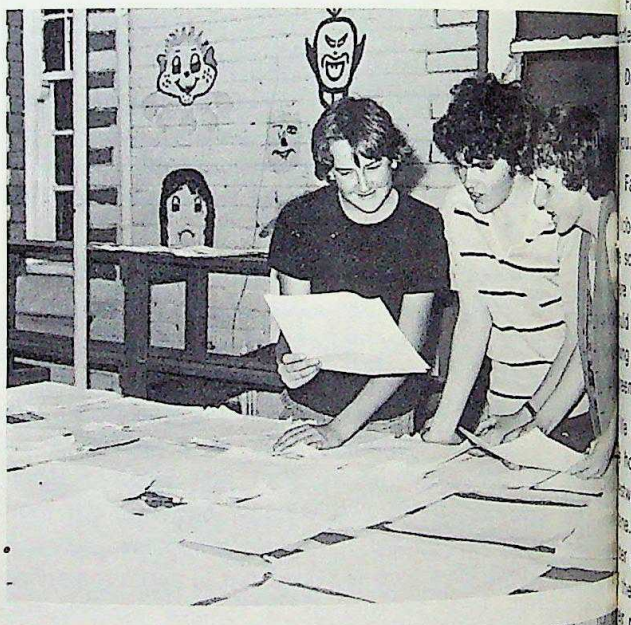
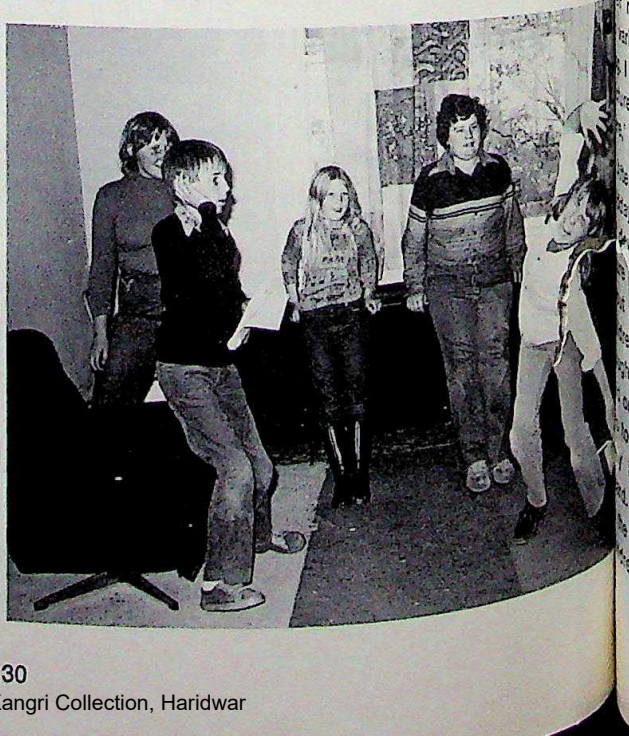
The youngsters learn about movement on stage, radio drama and film techniques.



Making props, checking scripts and acting.







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ting.

asked the children whether they wrote their own ce or whether it was improvised. 'It's both,' they There are some kids who like writing plays. Last we had a National Young Playwrights' Weekend, some famous writers came down here and helped write plays, but whatever's written down is only an and we're allowed to change it if we think it sounds ' The guests at this year's Playwrights' Weekend in August included Alex Buzo, Margaret Kelly, el Cove and puppeteer Richard Bradshaw. The en on the stage seemed to be ad-libbing most e dialogue of the sketch we were watching. It dealt a classic problem parent: the father who refuses to s daughter go out with the boy friend of her choice. young actress argued with her juvenile father for a moments and then there was a knock on the door. daughter ran to admit her suitor who turned out to only twelve years old. Father and daughter confronted other downstage while the boy friend explored the d collection. . . .

Father: But he's too young for you! It's . . . ah . . . e-snatching!

Daughter: Then Mum must have been cradle-snatching when she married you. She's two years older than ou.

Father: That was different. I was twenty-two.

body could remember what had happened next in scene when they rehearsed it the week before and e was a general discussion as to whether the father d give his daughter permission to go out with her g admirer or not. When everyone had come to an sement, the show continued.

e left the main theatre area and moved on to one of house rooms where another member of staff, Faye wood, was conducting a rehearsal of a classroom e. A disciplinarian teacher was vainly trying to keep r among a group of bored children who were saying e things you feel that chlidren would like to say to r real-life teachers if they dared. The children were rious ages and abilities and the dialogue began to I asked one of the girls if she thought it was a real e of what school was like. 'Well it's all pretty unreal she said, 'it's like a fantasy.'

er the morning rehearsals are over there is a regular y meeting at the Shopfront where staff and children n together and talk over their problems and their jects. I was interested in what the girl had said theatre as a place of fantasy and I asked the whether they made up plays to show what they the world should really be like. 'Sometimes,' one of the girls. Errol Bray interrupted. 'The message to be stated strongly or it doesn't get across. Essen- it's propaganda for the rights of children to be I write a lot of the propaganda speeches myself. last Playground play there was a scene where the en are confronted by all the people who are going to look after them for the rest of their lives . . . the parents, the teachers, the lawyers, the politicians. In the end the mother shoots her revolutionary child and goes on making the tea. It's a shocking scene in some ways, but it has to be to make the point.' I asked him whether some of the parents objected to their children being encouraged to defy authority and convention.

'Yes, some do,' said Bray. 'After the last show one of the mothers came up to me and said, 'I enjoyed the play but I'd like to punch you on the nose.'

Despite the revolutionary talk, the children I observed at the Shopfront were remarkably composed and quiet as they went about their activities. Errol Bray told me that the children who come to the theatre tend to have certain things in common. They are usually starved of creative activity and delight in being able to use facilities which they do not have at home. There are also a number of children with fairly serious emotional problems, children who find release in the easy-going community of adults and other children at the Shopfront. Because of its location the theatre is essentially a community facility. There is very little money to spend on publicity and the children are recruited through posters placed in shop windows or information given to local schools. Occasionally children find their way to the theatre from outer suburbs, but nearly all of them come from within a radius of a few kilometres of Carlton station.

One of the activities that has inspired general interest in the Shopfront, apart from the Playwrights' Weekend, is the travelling 'Shakespeare Players', a group of the best actors in the older-age bracket, who take performances of Shakespeare and other works around the schools. When the theatre can sell tickets for its performances it may begin to attract not only the parents and friends of the children involved but a wider audience of Australians who are interested in the ideas and abilities of a new generation of dramatists. The audience might be surprised and even disturbed. It's unlikely that they will be bored, not when there are young playwrights like J. W. Turnbull about. His 'The Cow Cat of the Punjab' was one of the plays which emerged from the last Young Playwrights' Weekend and it contains plenty of entertaining dialogue. . . .

George: Well, Peters, it seems we have failed. Wentworth's ego has been punctured and we are out of supplies. It looks as if we are beaten.

Peters: George! What's that moving over there in the bushes?

George: By Jove! It's the Cow Cat of the Punjab!

Cow Cat: M-e-o-w, p-u-r-r, p-u-r-r . . .

George: Get it! (They attack it with acetylene torches and hockey sticks.) We've got it!

Peters: It's not in very good condition, is it?

George: Never mind. Nobody in England has ever seen one before, so it won't make much difference!

Gail Holst is a well-known Australian author and musicologist.

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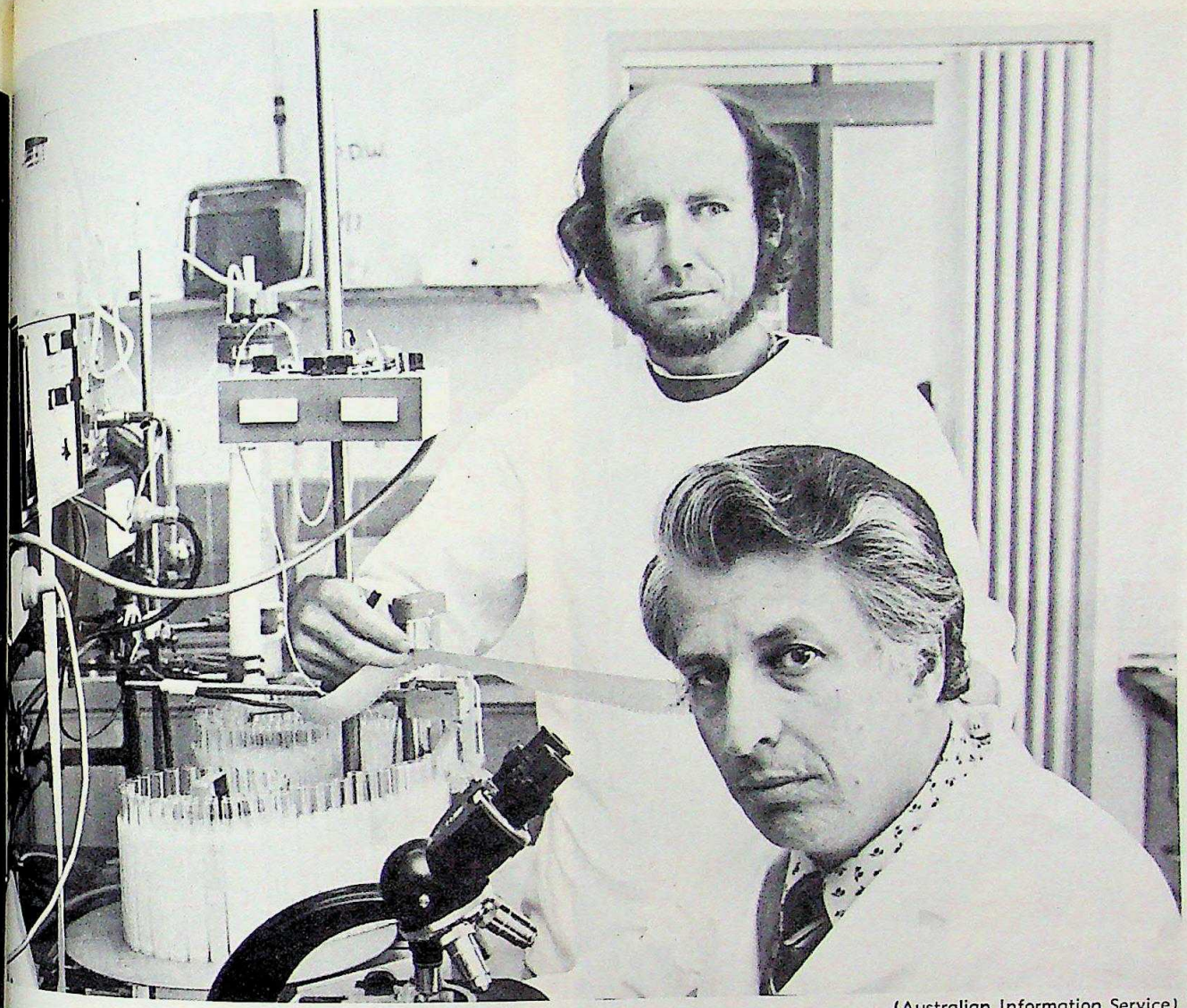

(Australian Information Service)

...ite page: The face of malaria. Above: Sir Gustav Nossal and a fellow worker at the Walter and Eliza Hall Institute of Medical Research, Melbourne. (All photographs, unless otherwise acknowledged, are from the World Health Organisation).

MICROBES BY THE MILLION

John Loughlin

...Australian closely involved in a new international ...rch and training program launched against tropical ...ses by the World Health Organisation is Sir Gustav ...al, Director of the Walter and Eliza Hall Institute of ...cal Research, in Melbourne.

...is highly crtiical of medical science for not coming ...s with what he calls the less fashionable ills of ...

...last couple of decades medical science has ...great advances in health problems, mainly those ...ing Western societies. Examples are: anti-polio ...ne, open-heart surgery, antibiotics, drugs for treat- ...neuroses and psychoses, organ transplants and in ...other fields of medicine.

...Sir Gustav draws attention to another aspect: 'I ...der it a scandal—a world-wide scandal—that at a time when millions and millions of dollars are spent on cancer and heart disease and illnesses affecting affluent, developed communities, advances in tropical and parasitic medicine have been so few. For example, malaria still affects some three hundred million people around the world. In Africa alone, a million children under ten die each year from this disease. Partly at least this is because little really modern research is done on these illnesses. River blindness, or onchocerciasis, is another example. This is an infection in which the larval forms of the worm get into the eyes and cause blindness. This d...se is so prevalent in large tracts of fertile land in the sub-Sahara region that people have had to leave their villages, afraid of being made blind by a disease carried by the Simulium flies. It is scandalous that a quarter of a century has gone by since a new drug was brought in for treating river blindness.

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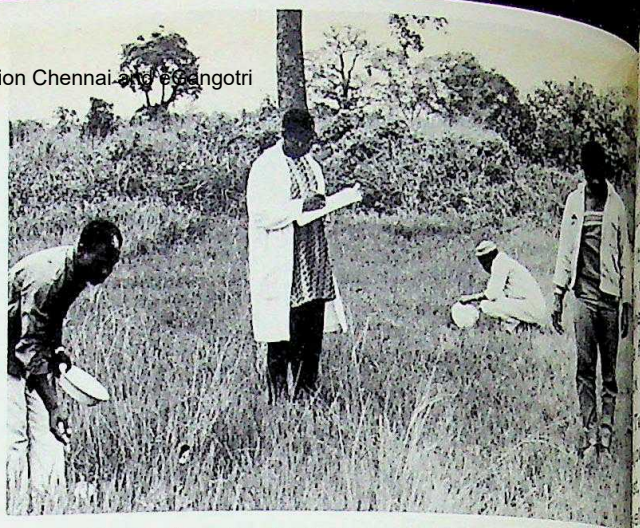
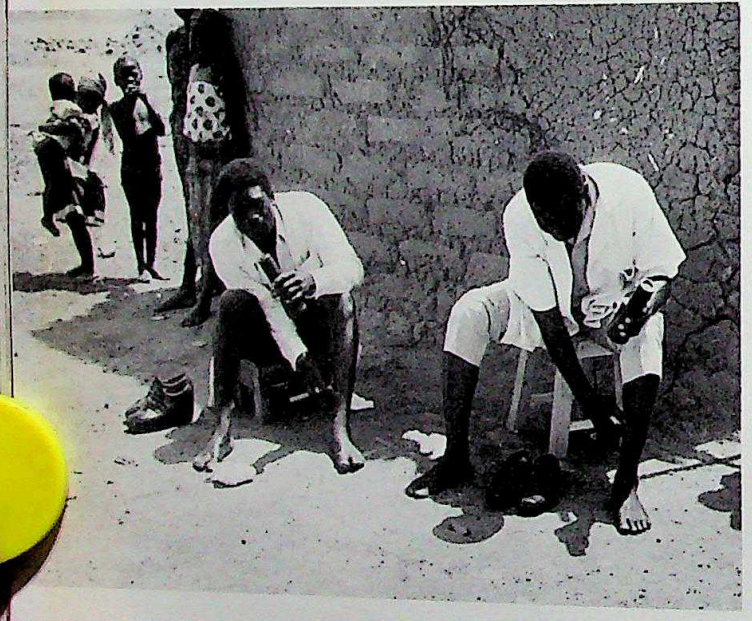
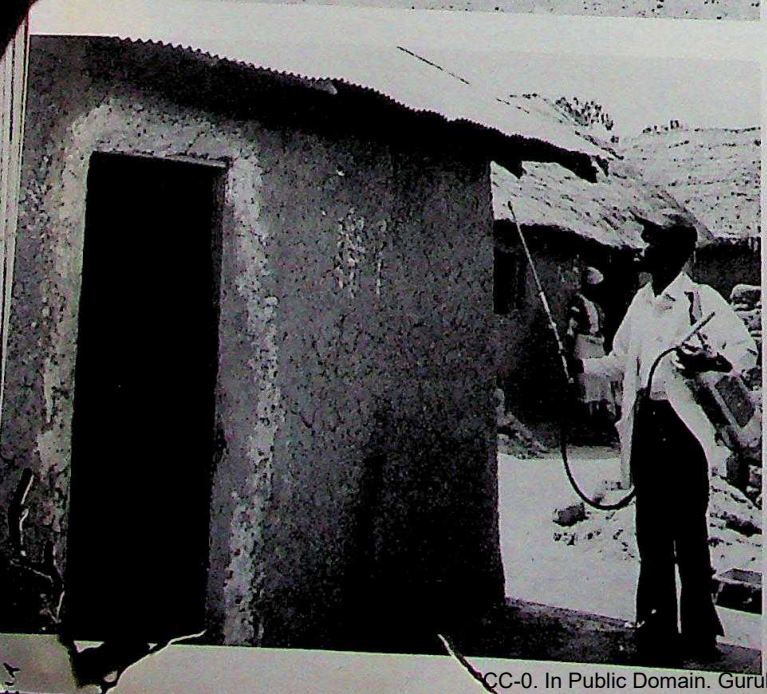


Above: Researchers in swampy country hunting for Anopheles larvae; below: a doctor in Thailand examining a child to see if the youngster has an enlarged spleen, a malaria symptom known for many centuries; bottom: a malaria patient being tended by a medical assistant in the Sudan.

Above: Blood samples being taken from children at a Nigerian school; below: using humans as 'bait' to catch mosquitoes; bottom: malaria eradication on the door step of an African house.





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for Anopheles
a child to see
alaria symptom
patient being
Sudan.

large proportion of the world's population still does even get health care of 1920s standard, let alone ent comparable to that available elsewhere today. is said that for most health problems in the develop- world the solutions need to be found at the political er than the medical level. I do not dispute that, but fact is that many of the problems stem from poverty, of education, and insufficient social organisation.

wo points should be made, however, concerning r medical research in the developing countries: people can emerge from what is called under- lopment surprisingly rapidly. A superficial look at es such as Thailand, Singapore and Hong Kong over past few decades shows how quickly this can happen. economic conditions improve, people in such areas clamour for high standards of health care and a d rate of progress in medicine consistent with their easing affluence. Adequate health care will depend good doctors, who can only come from good medical ols, staffed by men with high standards. The country wants medical care of the Western kind half a ury from now must start today to set up the necessary ework. All too often gifted and creative scientists developing countries want to work in their own lands r advanced study elsewhere but, often, the lack of nstitutional framework means that almost against their they drift back to the West.

thout such men, it is hard to see how adequate ical schools and thus adequate health care can come t.

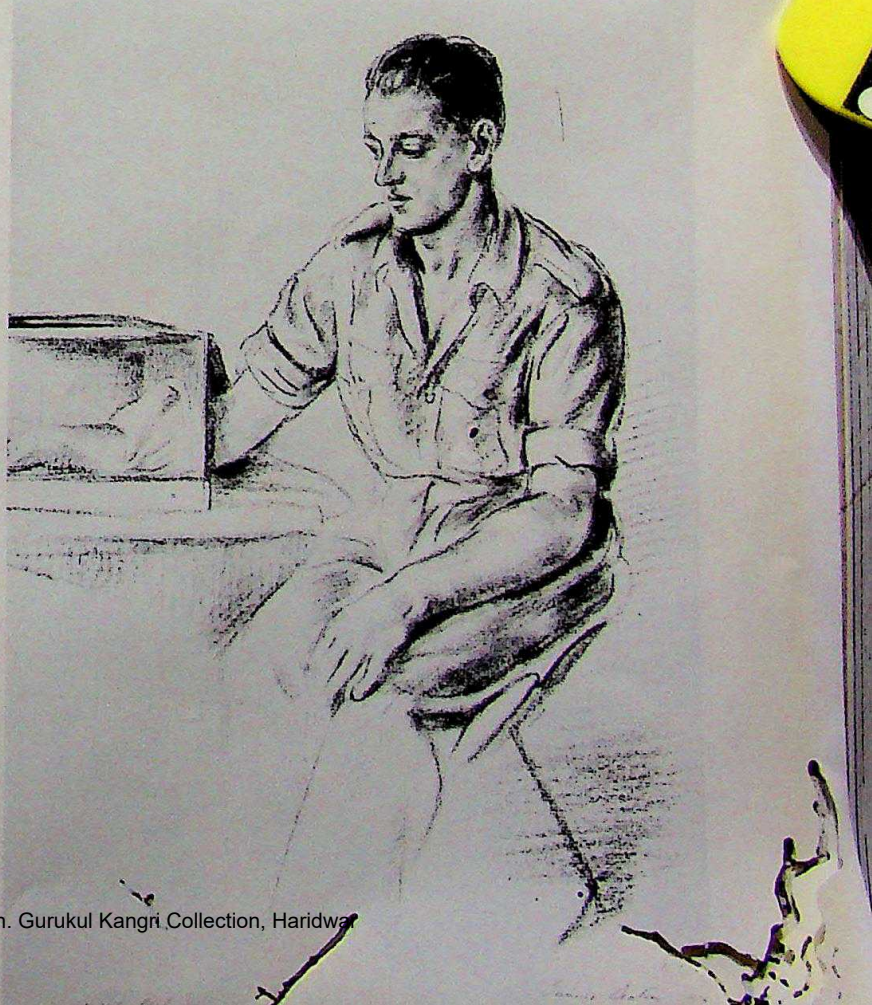
Secondly, the variety of human diseases, which de- ds so much on geography, makes it important for e of the less affluent nations to become involved in earch, so that all variance may be gone into.

Many serious infections and parasitic diseases occur in the tropics; some cancers are a hundred times e common in some areas than in others, often for mmon reasons. To uncover these reasons and control ceases requires research to be done locally.

t present the main burden of such research falls on ational organisation, for example the World Health nisation, or on individual investigators who have loped an interest in epidemiology, anthropology, ographical pathology or some such field. Excellent h such research may be, the end result is that is far less work being done on disease problems e developing world than on those of affluent coun- I consider it tremendously important that we begin ucate and train gifted people from the nations e these diseases occur to work on these problems selves and on the spot. Western man of course has nopoly of intelligence, as many distinguished ples have shown. It will require energy, goodwill, and finance. But it badly needs to be done.

e will have to change the present pattern whereby young medical graduates from developing countries

Above: Womenfolk in the Sudan washing dishes in the Nile. The waters harbour a snail in which live parasites causing schistosomiasis; below: a soldier with malaria infecting mosquitoes for research purposes. (Drawing by Nora Heysen, reproduced by courtesy of the Australian War Memorial, Canberra).



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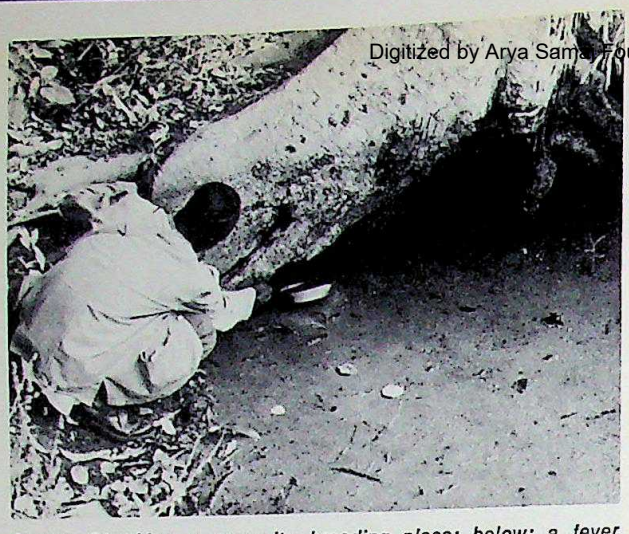

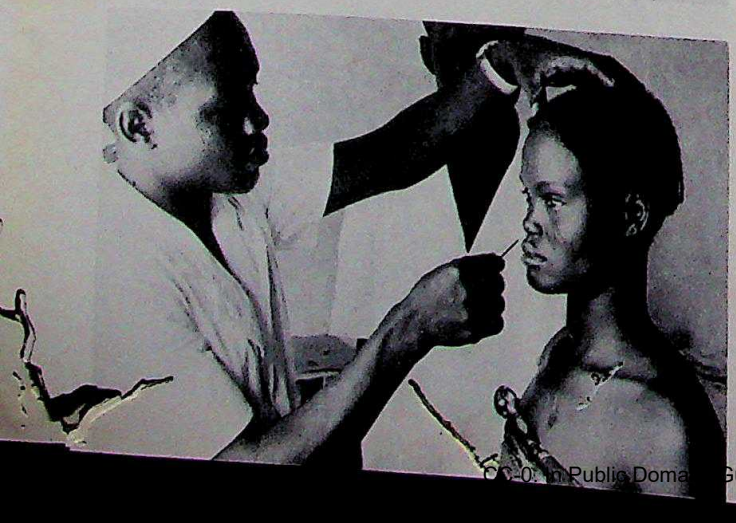

Above: Checking a mosquito breeding place; below: a fever patient drawn by Nora Heysen and reproduced here by courtesy of the Australian War Memorial; bottom: a patient being treated for leprosy in Africa. The Endemic Disease Service of the World Health Organisation operates from Bobo Dioulasso, in Upper Volta, and is famous for its work in the region.

are filled with the desire to emulate their post-graduate teachers at Cambridge University, the Rockefeller University or the Pasteur Institute in Paris.

'The new thinking reverses the old process of taking young doctors from the less affluent nations and bringing them to the West for advanced training. The approach today is to bring experts from the Western world to the developing country and set up research training programs in the local setting. The young worker does not suffer the cultural dislocation of a move to the West and does not develop a hankering for complex equipment and support as he would if sent to Harvard, Stanford or Cambridge. The training courses that we bring to bear on his post-graduate education should have more emphasis on practical matters than on highly theoretical research. Furthermore, the medical courses themselves in these countries could then be greatly shortened and simplified so that for a given expenditure of resources more medical personnel could emerge.

'For a good while yet the more fundamental research in subjects like parasitic diseases will have to go on in the developed countries. The research in developing countries should concentrate on the more operational aspects, such as field studies, drug trials, epidemiology, the influence of local environmental factors and a host of practical challenges requiring just as high intelligence but somewhat less technology than the molecular and fundamental studies.'

These convictions put forward with great feeling by one of Australia's most distinguished medical experts have given impulse and direction for the World Health Organisation's long-range program on tropical diseases which emerge from the Organisation's Advisory Committee on Medical Research. Sir Gustav Nossal sat on this Committee with two famous microbiologists, Jacques Monod, of France, and Joshua Lederberg, of Stanford University, who had been previously associated with the Australian scientist at the Institute which he directs in Melbourne. Another participant was Dr C. De Duve of Belgium.

The program, which began in 1976, is now co-sponsored by W.H.O., the United Nations Development Program and the World Bank. It will involve more than forty countries or agencies, either as contributors or as recipients of health. The budget for the first year of thirteen million Australian dollars will more than double in five years. The greater part of the budget will, at first, be used for mission-oriented research and the rest to training and to strengthening existing institutions. The emphasis will change as the scheme goes on, probably with some further growth in the training field.

The tropical diseases program, now one of W.H.O.'s most important projects, will concentrate on six groups of infectious tropical diseases, notably malaria, snail fever (schistosomiasis), river blindness (onchocerciasis), sleeping sickness (trypanosomiasis and leprosy. The scope of the program is thus restricted in order to

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...le resources more effectively, but Sir Gustav Nossal ...hasises its wider significance, saying that the work ...become world-wide and, because so much funded ...arch will be carried out in leading international ...utions, the benefits will be widely available.

...e chief aim in practical terms is to find better drugs ...vaccines which will be long-acting, safe, cheap, and ...ble for mass populations.

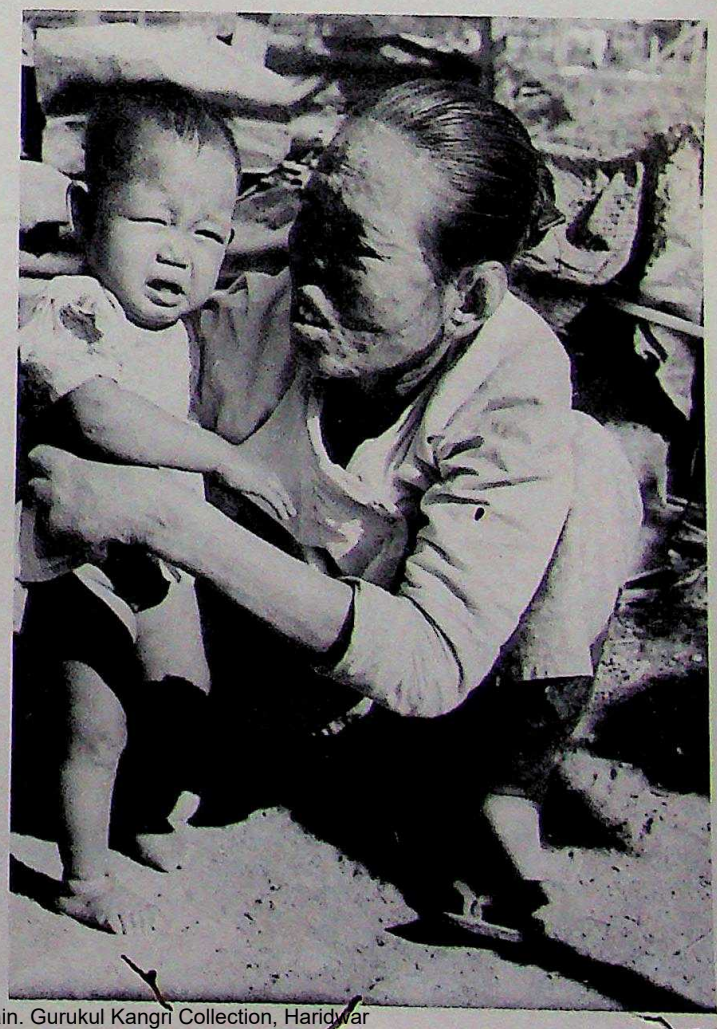
...perts in tropical medicine from many countries are ...g part in the work of a technical advisory committee. ...dition to this, a number of task-forces have been ...up, each dealing with a specific disease. They will ... out the best methods of fighting the diseases ...gh immunology, vaccines or drugs. At the same ... the program includes the training of scientific and ...ical workers and strengthening the medical and ...arch institutions where the program is operating.

...e Director says that his own Institute, which is ...nationally known, has a centre of immunology re... which will play an important part. Not only Sir ...v but another of its top scientists, head of its ...imental pathology unit, Dr Jacques Miller, is a ...er of W.H.O.'s committee working on malaria im...logy. He is in charge of malarial research at the ...te in Melbourne. Sir Gustav said that the appear... of parasitic bearing mosquitoes resistant to insecti... and of malarial strains resistant to drugs in some ...s were causing much concern, although he hoped ...ver the next ten or fifteen years research would ...e new protection against the disease.

...ther colleague at the Institute, Dr Graham Mitchell, ...uilding up a team to work on immunology against ...ic diseases. Links between this team and others ... tropical diseases occur, such as the Institute of ...al Research in Goroka (Papua New Guinea), the ...te of Medical Research in Kuala Lumpur, and the ... research and training centre at Nairobi (Kenya). ...am has been granted one hundred thousand dollars ...by the Rockefeller Foundation. Already a number ... members from the Walter and Eliza Hall Institute ...olved in training courses organised by W.H.O. ...ous countries.

...ical diseases in South-East Asia are to be looked ...osely by the World Health Organisation, while the ... Council for the Western Pacific, chaired by Sir ..., is now considering the best ways of extending ...ogram to that area. A special research unit for ...al diseases is to be set up at Kuala Lumpur within ...alaysian Institute for Medical Research. There is, ... Gustav, sees it, a major challenge to bio-medical ...ch throughout the world to come up with some big ...ments in that field, particularly in finding new ...es.

Young and old victims of the dreaded leprosy, which, however, can be cured if treated early enough.



...oughlin, a former feature writer with the Australian ...ion Service, is now a free lance journalist.

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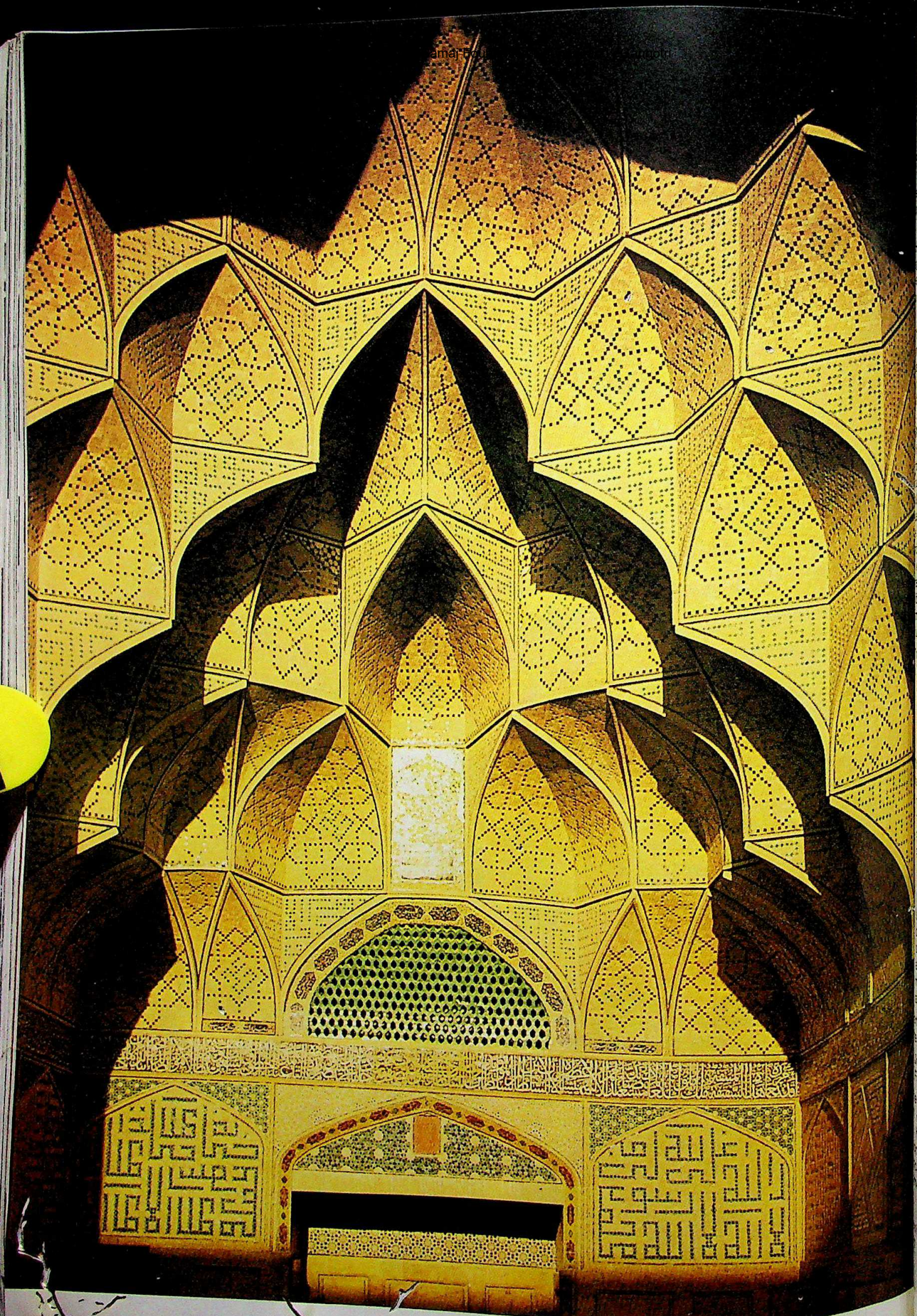

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PERSIA—BRIDGE OF TURQUOISE

ersia: Bridge of Turquoise, designed and photographed oloff Beny; essay and anthology by Seyyed Hossein historical notes on the plates by Mitchell Crites; es and Hudson. ISBN 0 500 24097 3.

S book is a nearly perfect fusion of the poetry of e, of verse, of prose and of fact—of fact because of the stories told are of eras so harmoniously faded antiquity that they seem legendary. Beyond all that, ook is a masterpiece of the book-maker's craft.

e photographs have that too-rare quality of complete age to their subjects, whether they be the vertical, edged rock formations of a Baluchestan rock wall gorge or the time-worn calligraphy and formal bas- designs of a prayer niche in golden-brown stone; ascetic stockiness of the lines of the mud-brick ings in Qahrmanlu, in the north-west corner of the try, near the Turkish border, or the infinite delicacy e tiles of the interior of the dome of the Shayk llāh Mosque in Isfahan, pictures of youngsters or residences, deserts or lush gardens, bazaars or y, silent Persepolis—each is exactly as it should be. feels a little in awe, not merely because of their er, but because of their quality, and one remembers ords used by the United States poet, Carl Sandburg, years ago in his prologue to the photographic tion *The Family of Man:* 'A camera testament, a of the grand canyon of humanity, an epic woven , mystery and holiness . . .'

e richness of Persian verse is well attested, as in anza from Sa'adī, of the thirteenth century:

. . . Nightingales! The moment of the Rose
as come, time for the dirge of desire.
y sober friend, are you less than
e drunken songbird? Then lament!

a different kind, suited to a country of great arid es and a country placed as is Iran:

Travel is the School of Man, threshold of high rank,
Treasury of wealth, master of all skills.
People stuck at home amount to nothing.
Precious jewels in the mine are worthless.
(Anwarī, twelfth century).

decree of the sixteenth-century Shāh Tahmāsb:

pon his auspicious arrival, let him drink fine sherbets f lemon and rose water, cooled with snow; then erve him preserves of apple, watermelon, grapes nd other fruits, just as I have ordered. For this yal guest, prepare each drink with sweet attars and mbergris . . .'

eps a further piece of good advice is from Rūdakī, tenth century:

yful, be joyful with those of the dark eyes
or the whole world is naught but a tale and a cry.

essay is, as one would expect from its author, a distinguished one. Seyyed Hossein Nasr graduated honours in physics from the M.I.T. and got his ate from Harvard after studying the history of e and philosophy there. He is Chancellor of eheir University and Director of the Imperial Iranian Academy of Philosophy, and has found time to write more than fourteen books.

He begins by saying that the word Persia evokes at once 'the image of a land of far away and long ago, and that of a present reality in the heart of Asia . . . and joining both geographically and spiritually the Mediterranean world and the universe of Abraham with the Indian subcontinent . . .' It is, the author points out, a dry country, yet famous for its gardens, and, more recently, for its oil, in addition to its other mineral wealth. Its first known inhabitants were Aryans, but through the millenia, it has absorbed many peoples, from the Greeks to the Mongols.

The author speaks of the religions of Persia, adding that, 'Throughout their history, the Persians have refused to divorce sensuous beauty from its spiritual prototype' and he gives an explanation for the balanced richness of sacred buildings: 'Colours became combined with numbers and geometric figures to create those masterpieces of sacred art which are the tiled mosques of cities such as Isfahan and Mashhad . . .'

Seyyed Hossein Nasr, himself what the Europeans would call 'a rounded man', indicates that most Persian metaphysicians and philosophers have composed poetry, but 'Persia has produced the only figure in human history who was both an outstanding mathematician and a poet, namely Omar Khayyām'.

The introductory essay, as is clear from these few quotations, covers, in what one might be pardoned for calling an *attar* of poetic prose, the geography, the history and the nature of Persia, not forgetting the importance of the arrival of Islam to the country culturally and in other ways, but without forgetting the importance of Sufism, the more ascetic form of Islam, to the country, nor, indeed, of Persia's importance to those teachings. The contributions of the country to literature, to philosophy, to science—not least to medicine—in which names which were known all over the Western world lived and worked — Avicenna for one.

Not least of the values of the book are the detailed notes on the photographs by Mitchell Crites, a teacher and archaeologist who lives in Delhi. The publishers are to be congratulated on their most important role in directing such a gifted group.

In conclusion, a word from Seyyed Hossein Nasr might be borrowed to introduce a final quotation. He says, in part, 'And indeed in Persian culture poetry has largely contributed to the fusion of the natural and supernatural orders'.

The quotation is from Fakhr al-Dīn Rāzī, of the twelfth century.

> 'This body was not created for immortality: I see with my own eyes that it changes and passes from one state to another: once it was a child, then it became a young man, and now it is old. But if it were deathless, would it not have remained unchanging? And since it has not done so, has it then been born for immortality? No, he who demands immortal life of his body shall be offended by it, when he discovers how impossible is his desire; in truth, the offence is from himself, for he has asked deathlessness of that which by its very nature is mortal.'

DANIEL CAMERON

e page: Interior, the Friday Mosque in Isfahan, originally rom the Seljuk period (twelfth century) but completed in the early eighteenth century.

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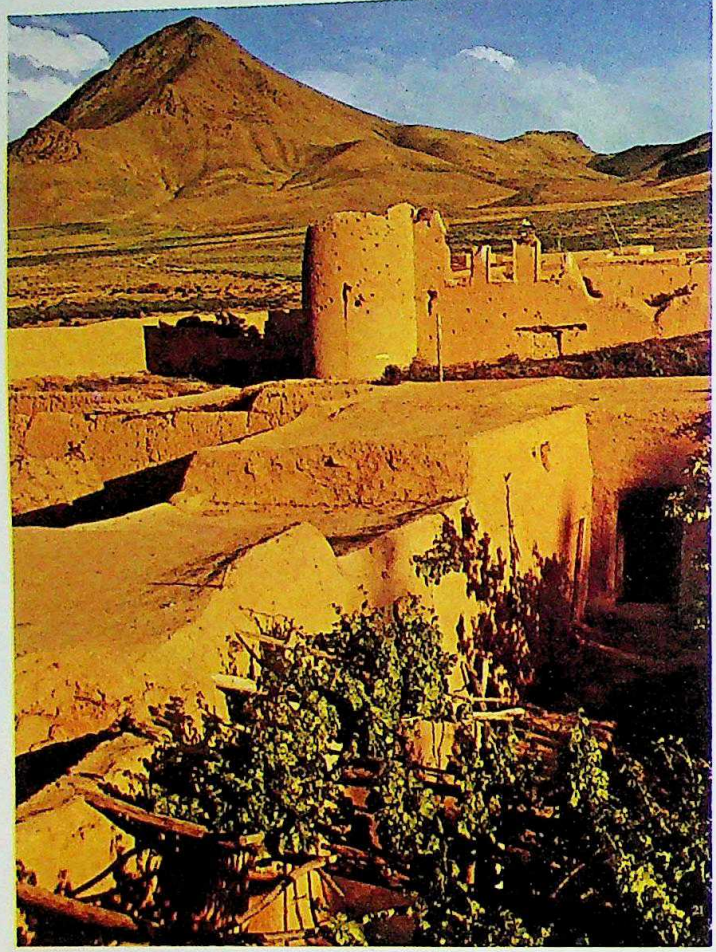
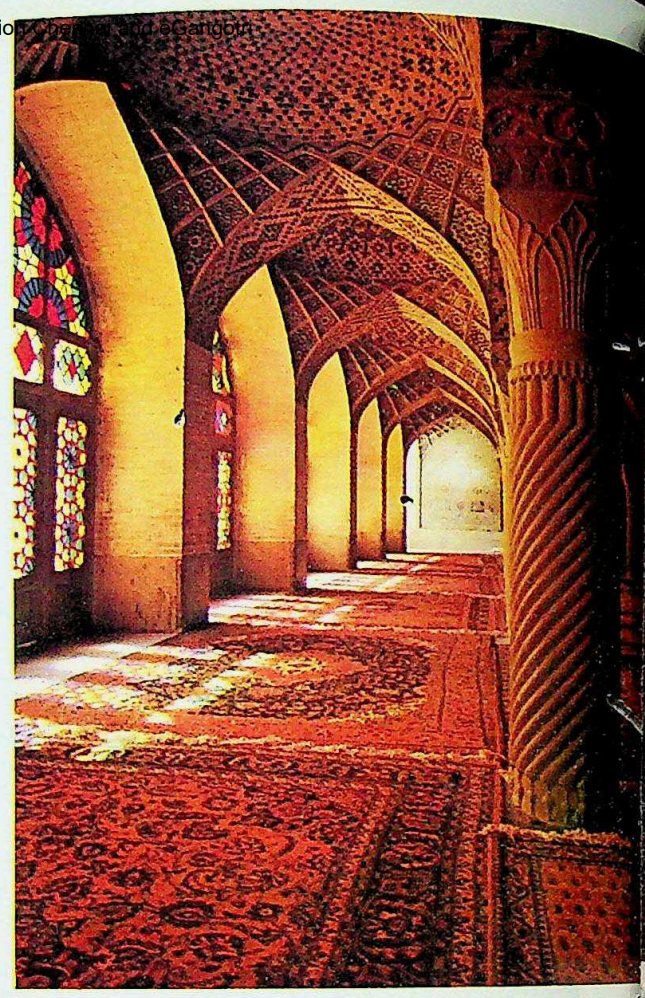
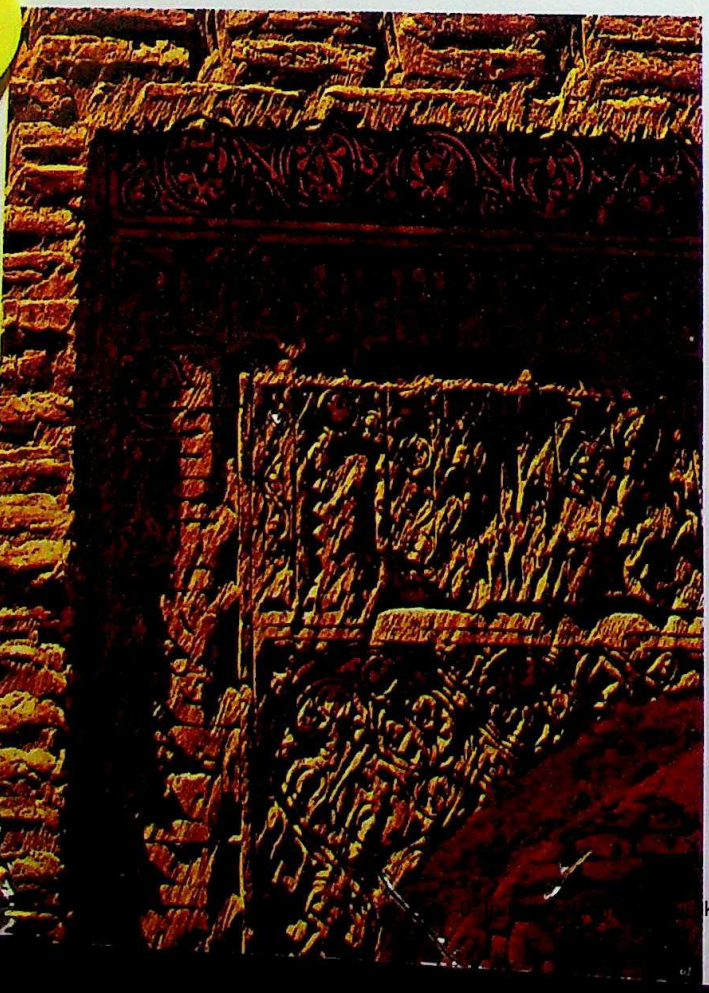


Qahrmanlu, a mud-brick village in the western part of Iran, not far from the Turkish border.

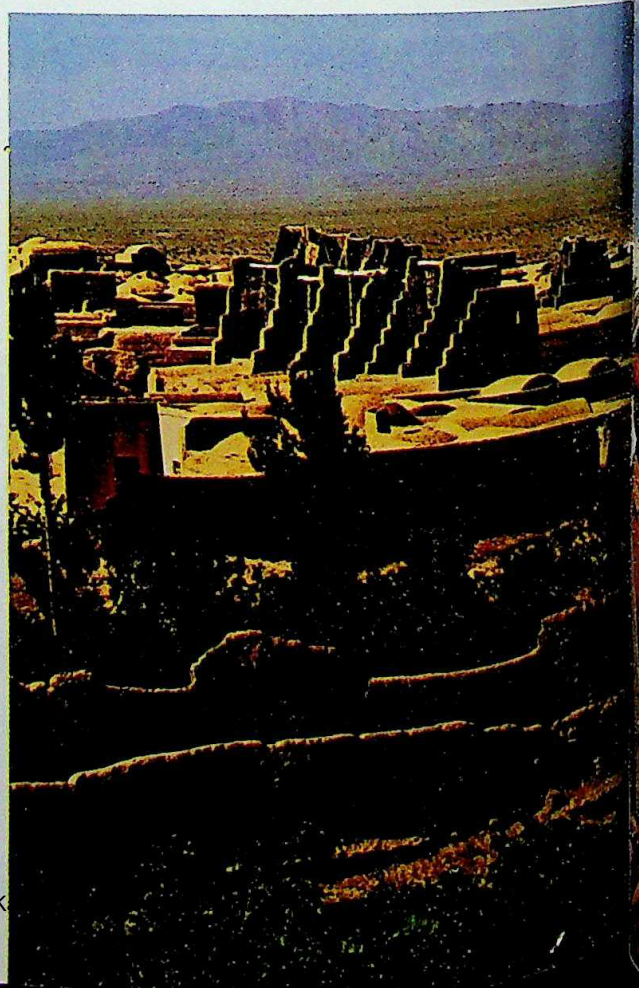


The Winter Prayer Hall, the Nasīr al-Molk Mosque, Shiraz.

A prayer niche of the Seljuk period, at the Rebat-e Sharaf caravanserai.



Windmills at Khwaf, in the Khorasan Desert, near Afghanistan. The vanes rotate on vertical axes within their mud-wall supports.



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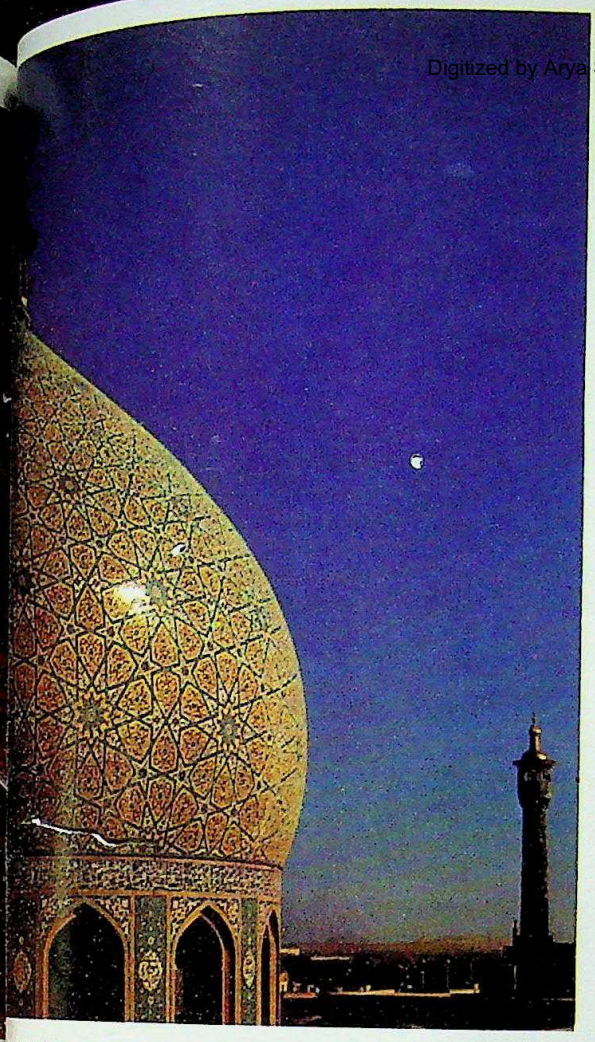
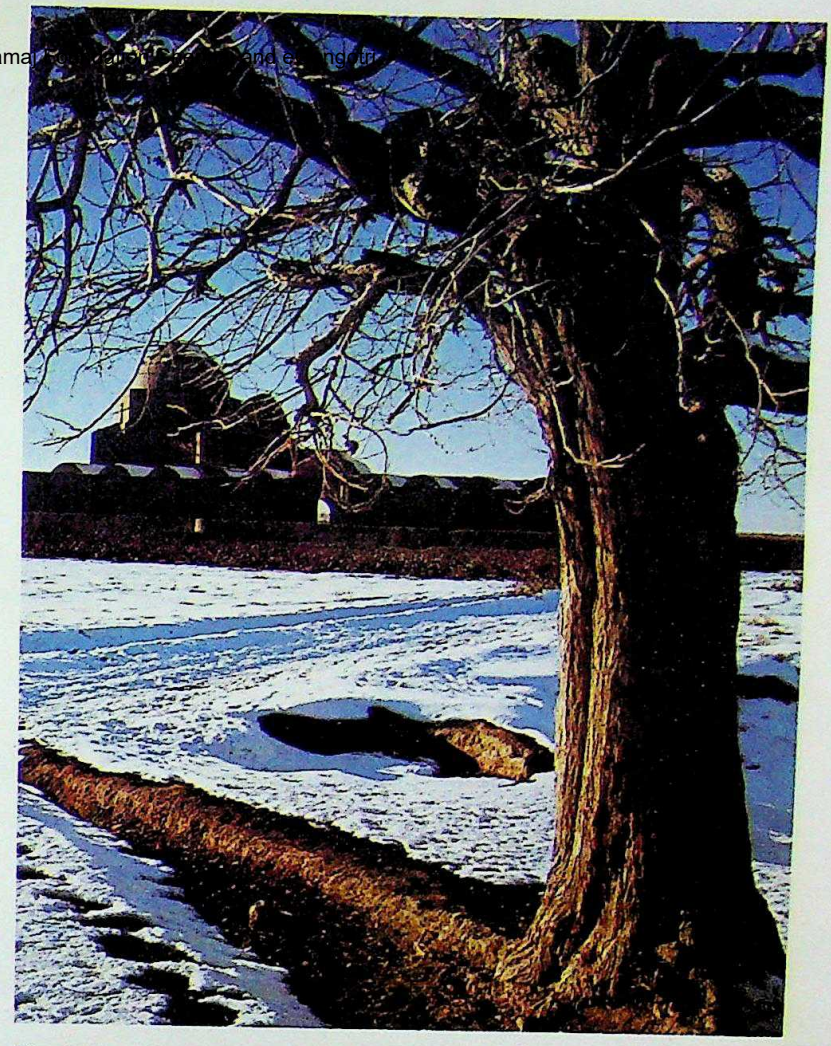
ue, Shiraz.



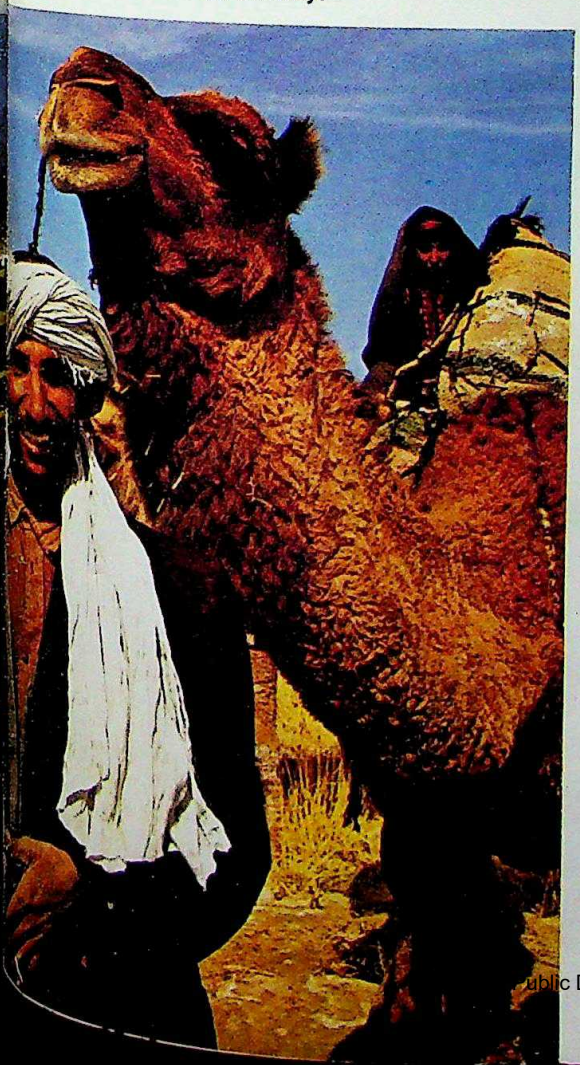
e of a mosque and minarets at Qom, gifts of the Qājār rulers.



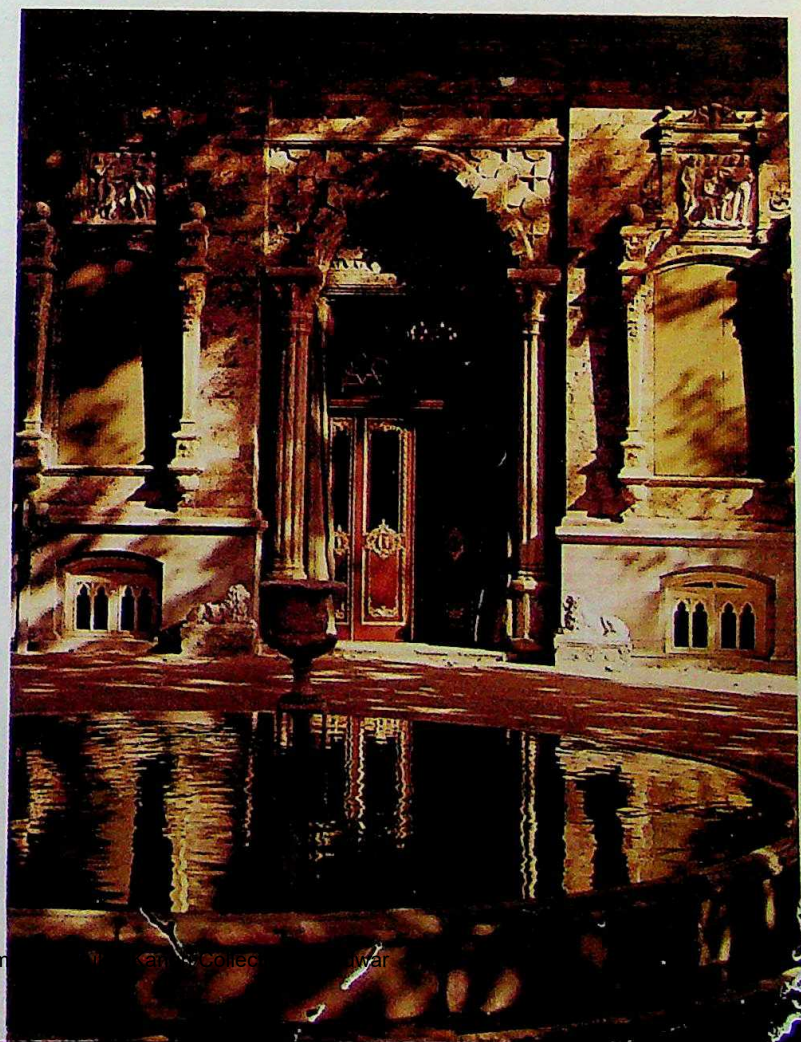
The Friday Mosque, recently restored, at Varamin, near Tehran, dating from Mongol times.

Afghanistan.
wall supports.

man, with his wife and camels, ready to set off across the desert country.



The Shahvand Palace, Tehran.



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A BIGGER **HEMISPHERE**

CHANGES IN 1979

From next year *HEMISPHERE* will be published bi-monthly. Each issue will be bigger—sixty-four pages instead of the present forty. The first enlarged bi-monthly issue will appear next February.

The new larger edition will have benefits for readers. It will enable us to publish a wider range of articles, with more quality illustrations, in every issue. We shall also be able to publish in a single issue several articles on a subject of special interest and at the same time find space for other matters.

Special issues are planned to coincide with the International Conference on Indian Ocean Studies (Perth, August 1979) and the first International Conference on Traditional Asian Medicine (Canberra, September 1979).

HEMISPHERE will continue to be a magazine for thoughtful people who want to keep up to date with current scientific discoveries, history, the arts and more in Asia and Australia.

Subscription rates: The present annual subscription rate is $A7.50. A single copy costs seventy-five cents. These rates are under review, and subscribers will be advised in the near future of any changes which will apply.

Current subscribers will receive all issues of the magazine produced in the one year period covered by the $A7.50 subscription. For example, for a subscription due to expire in June 1979, the subscriber would receive six monthly issues in 1978 and three of the larger bi-monthly issues in 1979.

New subscribers: Pending a decision on a new subscription price, we are accepting new annual subscriptions at the $A7.50 rate. This entitles a subscriber to receive all issues produced in a one year period.

Note: For primary and secondary schools, the current subscription rate is $A3.00 per year.

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HEMISPHERE

AN ASIAN-AUSTRALIAN MAGAZINE

VOL. 23 NO. 1

Recommended Price: $A1.25

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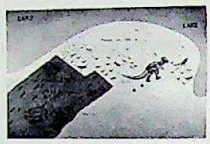

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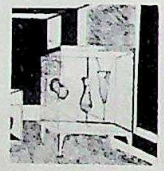

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HEMISPHERE

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AT ISSN 0018-0300

Editor: KENNETH RUSSELL HENDERSON
Assistant: D. S. ABEYAGUNAWARDENA

With the greatest regret, *Hemisphere* announces the deaths of two of its distinguished contributors, Professor Louis Hambis, formerly of the Collège de France, and Professor J. A. Boyle, formerly of the University of Manchester. Our sympathy in their loss is extended to their wives and children.

EDITORIAL

HEMISPHERE begins its twenty-third year of publication with a major improvement: it is bigger in size than ever before. This issue is of sixty-four pages instead of the forty in previous issues. The magazine will appear every second month during the course of this year.

The bigger issues will mean that more ground can be covered, some of it in greater detail, than before, so that there will be something of interest to everyone in each issue. The fact that the magazine is coming out every second month will mean that we can meet staffing problems and the high cost of handling the magazines with greater ease in future.

One thing that will not change is the standard of the contributors and of their material: writers and experts of world class are scheduled for publication throughout the year.

Two special issues are planned: one, mainly dealing with the Indian Ocean, will be coming out in mid-year; the following issue will deal with traditional Asian Medicine. They are being produced in conjunction with the Conference on the Indian Ocean to be held in Perth, and the International Conference on Traditional Asian Medicine in Canberra, in August and September of this year. The latter is the first world conference ever to be held on traditional Asian methods of healing.

So, in these fields, in technology, in literature, sociology, the arts, history . . . in all this and many others, *Hemisphere* will continue to give authoritative and up-to-date information about Asia, Australia and the peoples of our shared oceans.

COVER: *In the Simpson Desert. Photograph Trevor Blake. See article beginning on page 2.*

OPPOSITE: *'Son of the soil', a study by Harold Cazneaux, a selection of whose photographs has been published by the National Library of Australia. See review on page 22.*

HEMISPHERE *does not necessarily endorse views expressed in signed contributions.*

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A young Wedgetail Eagle at Ayers Rock (Uluru) in the centre of Australia.

AUSTRALIAN SANDHILL DESERTS

Ralf Buckley

TRAVELLING alone across the Simpson dune fields, using the compass and counting the miles, a European is always aware how tenuous is the line of retreat. Near the margins one soon recognises individual dunes from the sterilities of shape and colour, and water is never far away. But in the Centre one sandhill is very like another and one leaves the tracks cut by seismic exploration crews. Red ridges dotted with sand-filled cane-grass tussocks cut through an endless sea of spinifex and spear grass sun-dried to straw. Acacia and needlewood trees speckle the intervening flats or 'swales'. The rains come and go, and during droughts nearly all the plants die and the wind blows sand back and forth along the dune crests.

This movement has little effect on the main core of the ridges, which have probably stood unchanged, eighty feet high and tens or hundreds of miles long, for many thousands of years. Blowing sand was a major source of

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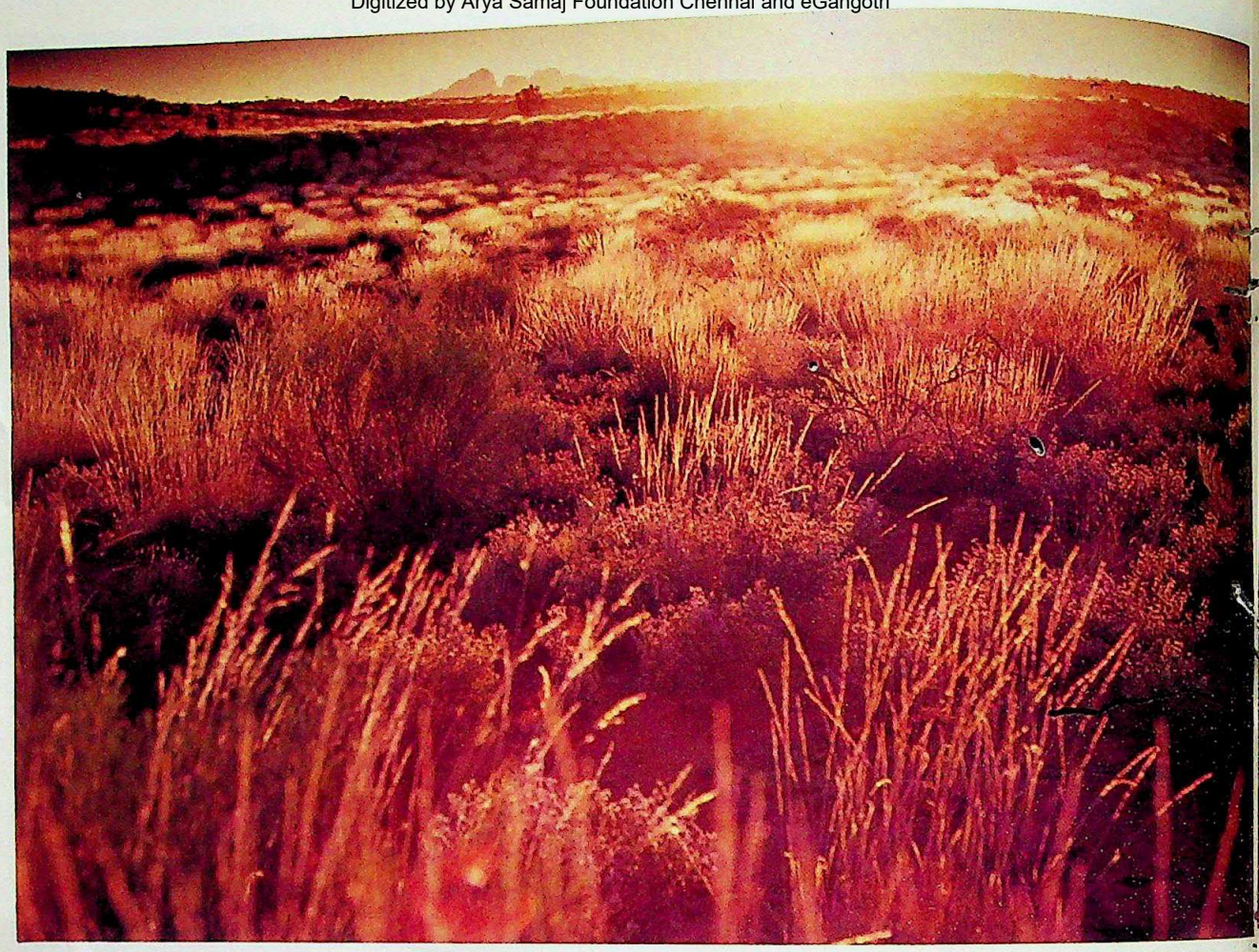
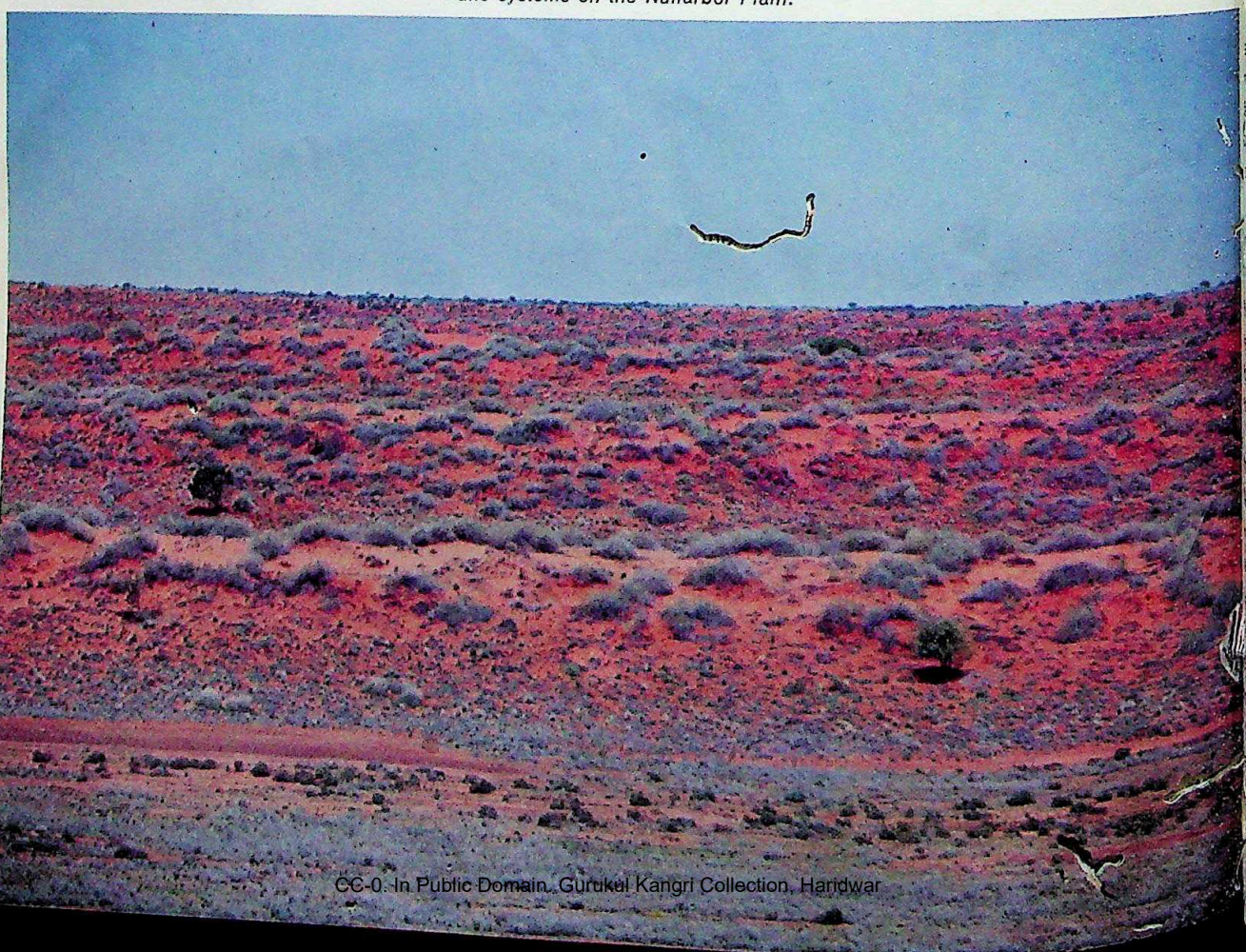


Sunset over feathertop spinifex near the Olgas, close to the Centre.

Dune systems on the Nullarbor Plain.



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The desert blossoms after winter rain: a Pussytail bush (Ptilotus sp.).

...tion to most early explorers, who found the Simpson ...en and desolate, a desert to be avoided or skirted ...r duress. When Gregory visited the area near ...per's Creek in 1901, for example, the country was ...ry and bare that he found only:

'... a needle-bush to every two or three square miles, ... a tuft of dead cane grass and a dead wild carrot' ...ery five square yards . . .

...e Gibson Desert has a slightly higher rainfall and ...egetation is denser in consequence, though the early ...rers found it equally forbidding. It was named by ...t Giles after a companion who died during their ...ttempt to cross the desert. Giles' impressions are ...charised by his words in 1889:

'... whole country is covered with spinifex in every ...ection, and this, together with the poisonous bushes ... a few blood-wood trees, forms the only vegetation.

...e area forms part of the large Western Australian ...omplex, which comprises the Great Sandy, Little ... Canning, Gibson and Great Victoria Deserts. ...e stage the Canning Stock Route, running diagon- ...hrough the north-western dune fields, was used ...ly by drovers. The wells are still there but the ...no longer in use.

In the last decade heavy rains have greened the Simpson and filled the ephemeral rivers which spill into it, and the dune fields are full of life. Buried seed, dormant since the last wet years, germinated in the late sixties and patches of the yellow sandhill daisy-bush have spread from these foci. The dry drought-resistant stick-like stems of the deep-rooted cane grass bear triangular leaves and papery flower heads. Dune crests are re-colonised slowly after drought, since the fragile seedlings need several consecutive days of rain or cloud to survive, and suitable conditions are rare even in the wettest years. The time of year is also important. Most shrubs and herbs need winter rains, and the heavier summer falls bring little but grass.

Even in wet years spinifex does not reach the loose infertile dune crest sand, but its hummocks spread on the lower flanks. In dry years the central Simpson is too bare to carry fire, but after the 'Big Wet' in 1974 and subsequent heavy storms in 1975, several large fires swept through the north-western Simpson. In the distant past fires were started by lightning, and later by Aborigines burning the spinifex to flush out game. A high proportion of recent fires have spread from roads and tracks near the desert margins, accidentally ignited by a passing vehicle or a careless cigarette butt. Spinifex

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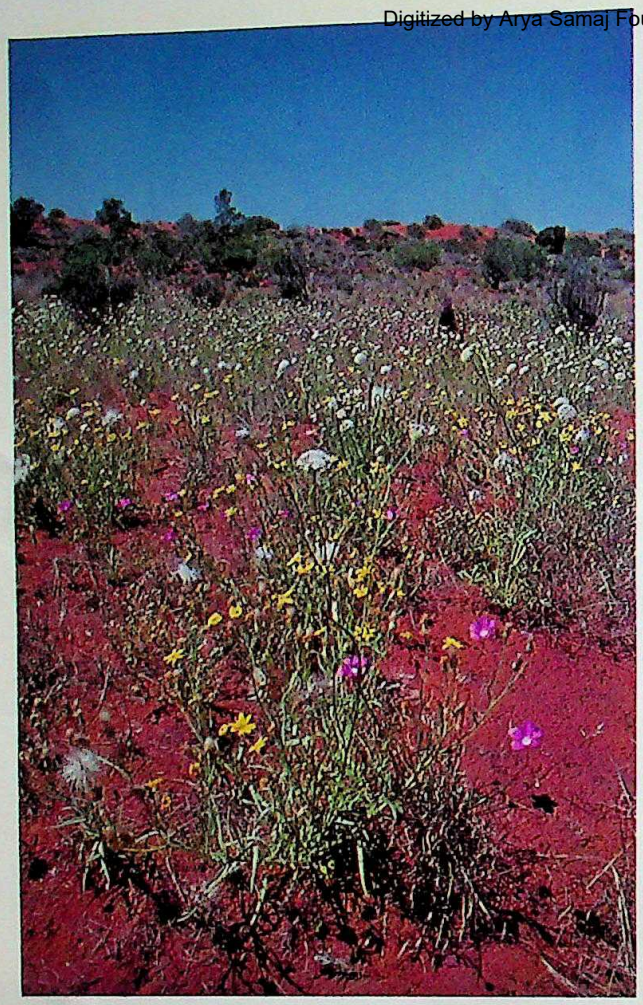
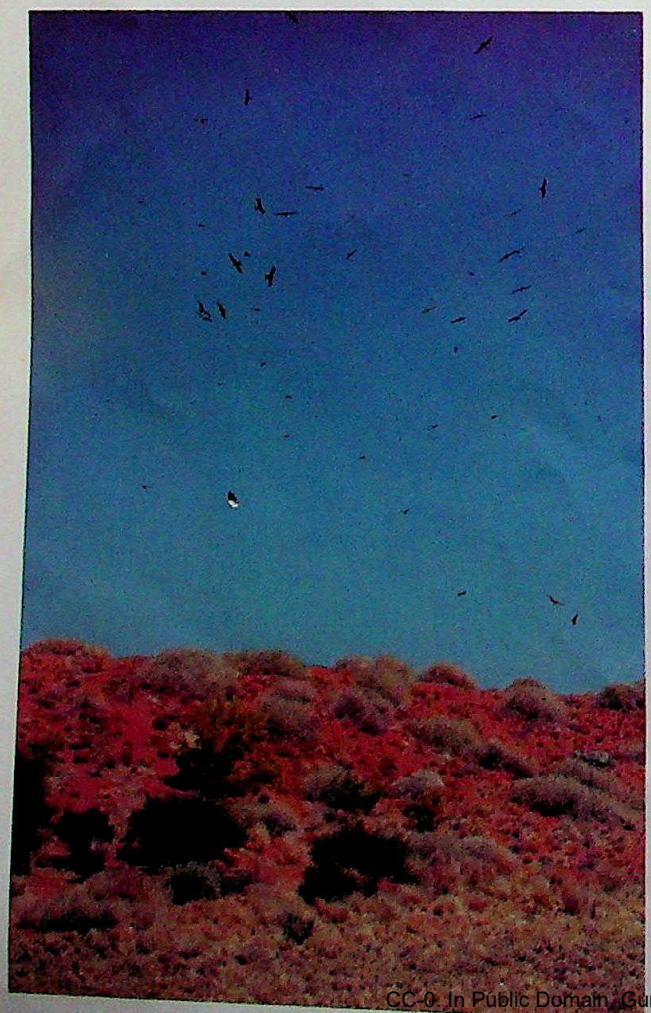


Ephemeral desert flowers; kites circle above a dune.



leaves and stems contain flammable gums and resins, and burn fiercely with flames reaching above a man's head. Unlike the line of typical grass fires, spinifex can produce 'firestorm' effects like a forest conflagration, with burning bushes being whisked into the air in local whirlwinds produced by the fire itself. Little is left afterwards save blackened termite mounds and scorpion holes, and white ash circles ringed by dark charcoal. Burrowing animals and ants and termites are unharmed, but lizards and snakes flee before the flames. Frequently the fire forms tongues rather than a continuous front, and many escape. Kites congregate quickly to swoop on insects and small animals driven into the open by the heat, and dingoes forage for lizards ahead of the fire. The large red kangaroo and euro outrun it easily, and return after rain to nibble the new shoots.

When winter rain follows a recent fire, the desert swales change from uniform spiky grey to a brief but beautiful carpet of ephemeral plants. Many grow sparsely amid the spinifex but bloom profusely only when it is gone. Yellow daisies mingle with the white flowers of the wild carrot and the purple parakylias and desert storkbill. Winter is always the best season in the Centre. In midsummer bush flies are out in force and cover eyes and skin from dawn till dusk. There may be a brief ten-minute interlude at dusk before the mosquitoes take over, but they are just as likely to overlap. Every uphill step is an effort and ants allow no respite should one stop. Stop too long and kites gather in endless spirals overhead or line the nearest dune crest in solemn anticipation. Water comes from the container hot enough to make coffee and supply is too short even to cool one's skull. Engines overheat, tools burn hands, sand burns feet, sky burns eyes.

In winter the nights are frosty. Sleep out and shiver, but the sun sets crimson and the starlight casts shadows. Flowering shrubs are finest in the western dune fields. The white flower spikes of the sandhill grevillea, a native Australian shrub, stand out against dark winter leaves. On the upper dune slopes the emu-bushes bloom a pale milk-blue, whilst lower down golden stalks of the feather-top spinifex frame purple desert myrtle, and another grevillea waves yellow tassels on supple grey-green stems. Its flowers fill briefly with a sweet and copious nectar, beloved by ants, Aboriginal children and at least one research worker. In the swales yellow cassias and a red emu-bush blossom beneath the mulga, and the third and tallest grevillea bears conical orange inflorescences amid thin silvery leaves. Small ants gather on the desert poplars to collect syrup exuded by sap-sucking scale insects, while large solitary ants, black and bright gold, roam the open red dune crests or skirmish briefly in territorial dispute. Harvesting species garner the shiny black seeds of the sandhill birdflower and pale grass seeds from the spinifex. Hopping mice glimmer briefly in the glare of torches or car headlamps but are hard to follow in the colourless moonlight. In the morning their

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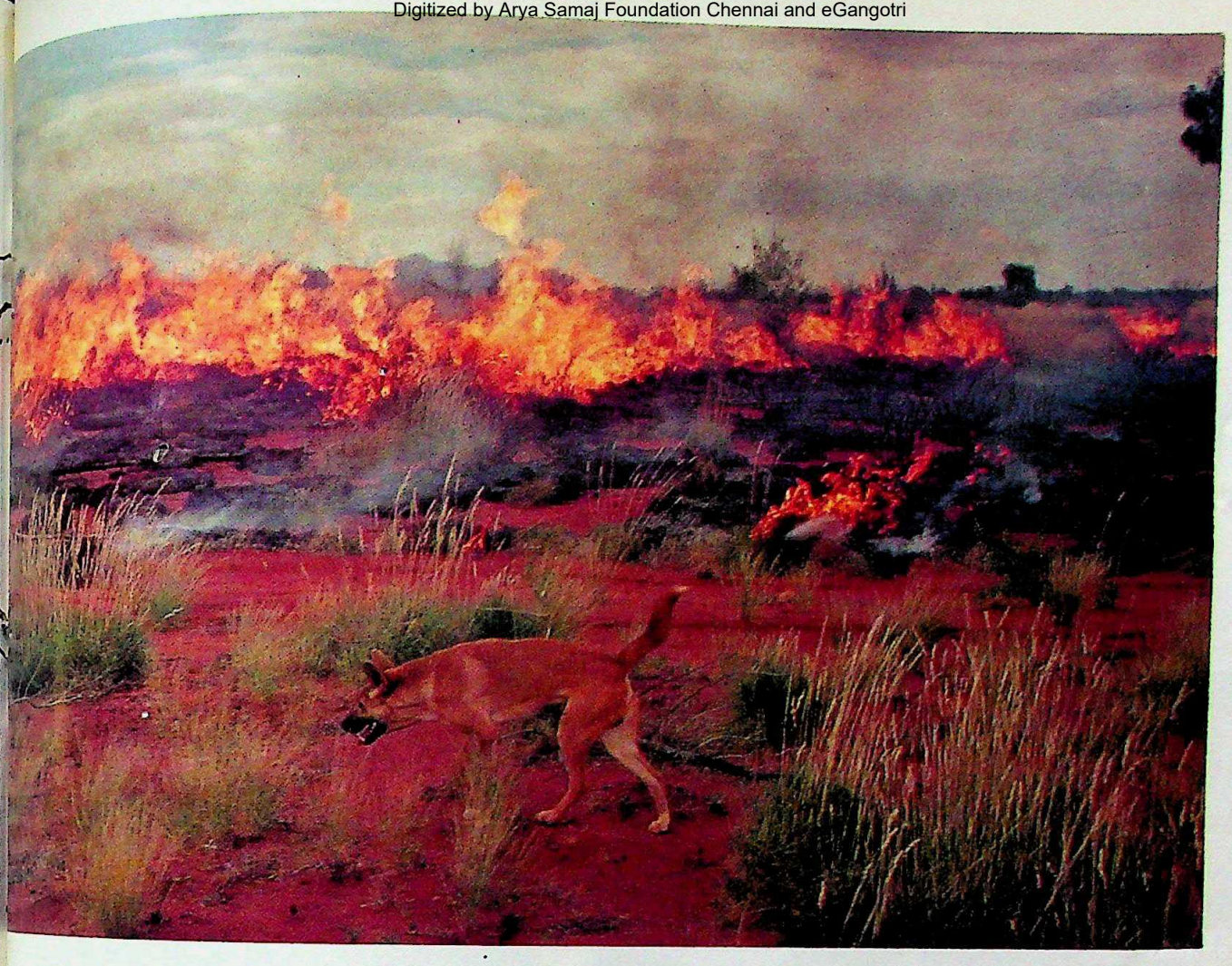

A dingo hunts for his prey, frightened by the grass fire; a possible victim, a fifty centimetre Perentie lizard.

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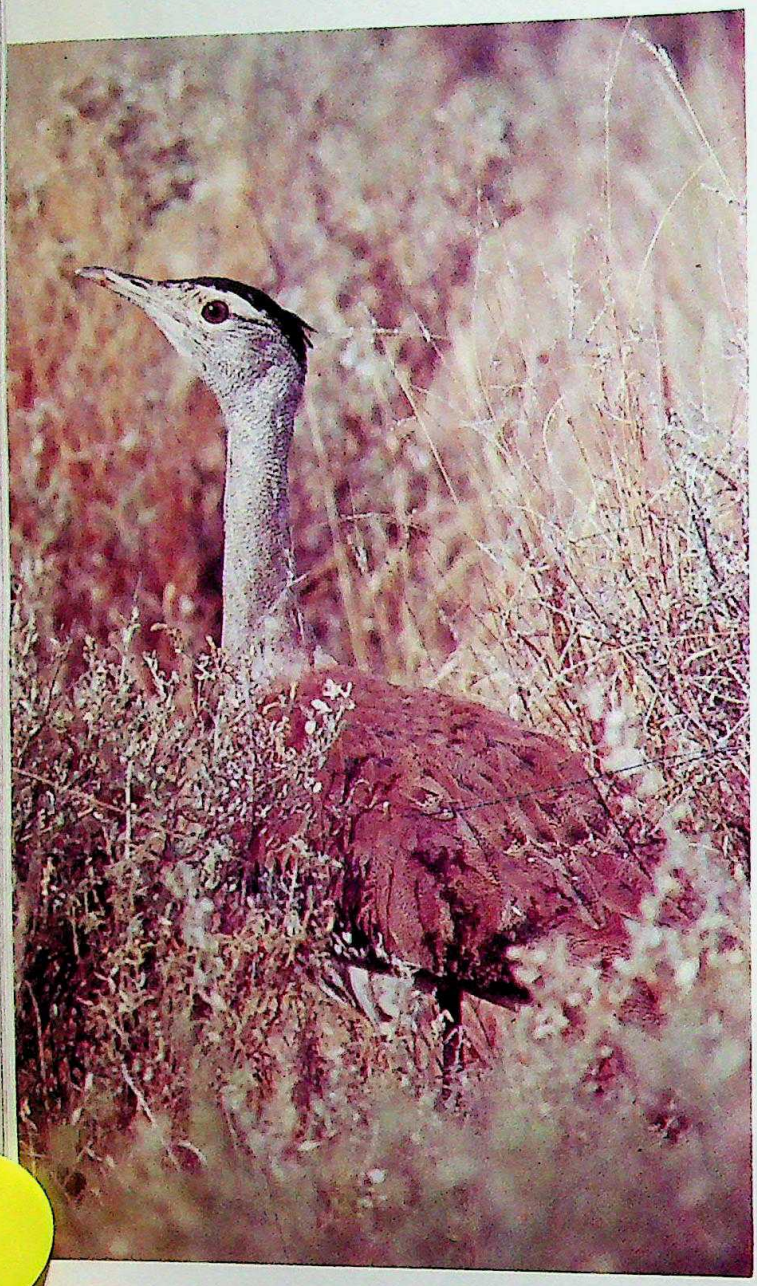

Grevillea stenobotrya.

A plains turkey.

tracks stand out on the loose sand until effaced by the wind.

While emus, plains turkeys and the little blue wrens live far from water, most birds congregate round soaks or pools. After torrential storms long-lasting swamps form in some areas, draining water from clay flats or several swales. The Kallacoopah River sometimes flows through the clay lake country in the south-eastern Simpson, and the Finke along part of its western margin. The stagnant water remaining accumulates an astonishing variety of birds, including pelicans and even spoonbills and avocets. Flocks of zebra finches are a sure indication of nearby water in drier times, their chirrupings counterpointing the whispering of the desert oaks in scattered groves on the western sands. Surprisingly tall in such an arid climate, these trees bear only tiny scale leaves, and even the faintest zephyr rustles their jointed twigs. Most inhabi tants of the dune fields are silent, but round the margins flocks of galahs rend the air at intervals, joined occasion ally by the magnificent black cockatoos or the communa buzz of budgerigars.

Summer brings out the lizards, and in the Gibson Desert the most conspicuous are the Military Dragon and its closest relative, identical save for colouration and known by some quirk as the Defenceless Dragon. At times every spinifex hummock seems to have one in residence In the Simpson the larger Bearded Dragon is n common. Its unfortunate habit of camouflaging itself a corrugation on vehicle tracks tests the nerves and reactions of any biologist on four wheels, though wise dragons do also sun themselves on dead mulga branches Greatest of the dune field lizards is the Perentie, occasion

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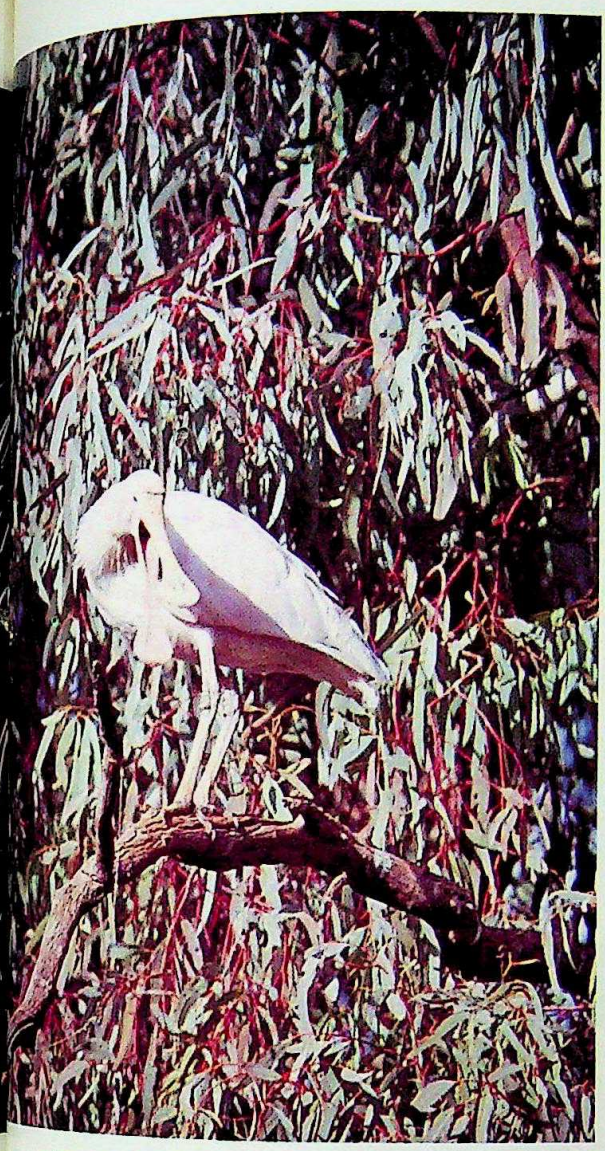

A Spoonbill in the Finke River district.

An Early Nancy (Anguillaria doica) *near the Olgas.*

...een stalking majestically through the spinifex. Its ...um length is as variable as that of sport-caught ...eight feet is well attested, but four or five more ...on. The sinuous groove of the occasional red-naped ...cuts the loose upper dune slope like the track of ...ert skier in powder snow, but the larger western ...ng brown snakes prefer the swales. Long important ...origines as food and mythological symbol, the fat ...armless carpet snake is the largest of the central ...an snakes.

...des native marsupials large and small and the ...ous rodents, a number of introduced animals ...the dune fields. Feral camels do little harm except ...they break station fences outside the deserts, but ...are causing considerable destruction in some ...dling sandridges with their warrens and eating all but the least palatable plants to tattered stumps. Occasional plagues of rats or mice flare briefly, but as these introduced rodents seem to prefer green plant material they do less damage than might be the case if they ate the seeds vital to regeneration.

In contrast to such *parvenus*, the ancestral inhabitants are self-effacing or invisible. A howling September gale may bring an inkling of the white Spirit Dingo, while on the stillest midsummer noon when simmering heat shimmers the air, lizards lie still and even the desert oaks are silent, the bush waits expectant for the great Dream Kangaroo, the *Malu Tjukurpa*.

The author is a biogeographer at the Australian National University. All photographs are his.

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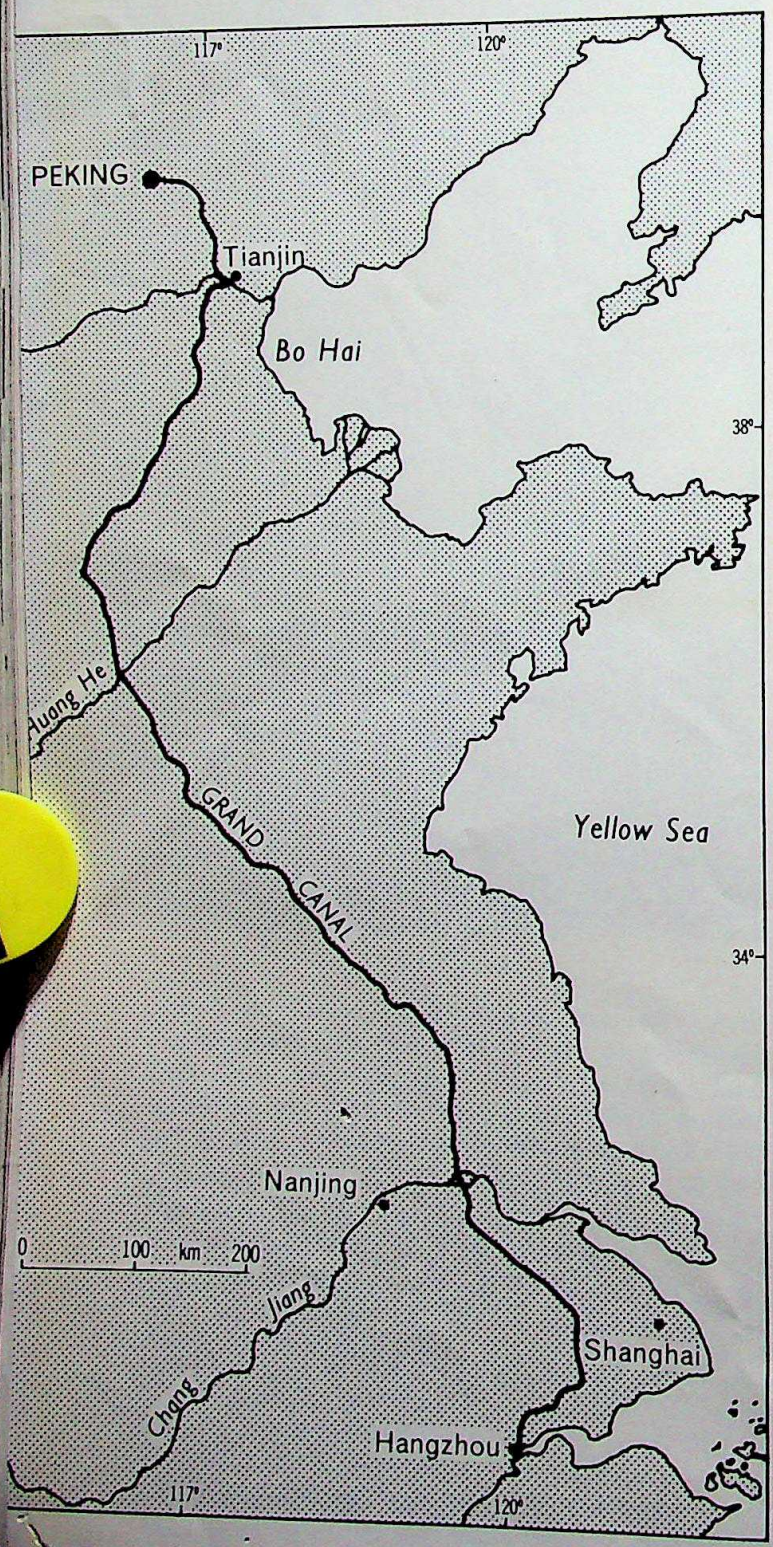
THE GRAND CANAL OF CHINA

Adrian Sever



ALMOST two and a half thousand years ago, Ho Lu, ruler of the small kingdom of Wu in east-central China, ordered the construction of a canal, one hundred and fifty kilometres long, from the Yangtze River south to Lake Tai Hu where his capital, Soochow, was situated. He did this so that his war junks on the Yangtze could manoeuvre on Lake Tai Hu as a check against his arch enemy, the king of Yueh. But in so doing he unwittingly laid the foundations of one of the most remarkable feats of engineering in the history of man — the Grand Canal of China.

China's rivers run from her western mountains to the eastern seas. Some of them count among the largest in the world. Many are treacherous rivers that have changed their courses drastically through the ages, causing appalling loss of life and property. Traditionally, they have always formed a series of barriers against the movement of peoples and trade between north and south. A wise ruler always devoted much of his energy and attention to the country's rivers and canals — dredging sandbars, constructing and maintaining dykes and levees, building canals. For centuries, the best criterion of a good administration was its record in flood control and the use of water resources.

In 590 A.D., more than a thousand years after Ho Lu built his canal, the second Emperor of the Sui Dynasty extended it at both ends: south to the Chientang River and north to the Yellow River. Two and a half million men and women were then forced to work on the construction of another canal from the Yellow River north to the Hai River near the modern city of Tientsin.

The Son of Heaven celebrated the opening of the waterway with a pleasure cruise along it on a magnificent sixty-five-metre dragon boat, complete with four decks of audience halls, banquet rooms and cabins towering fifteen metres above the water. The Empress travelled on a phoenix-shaped boat. They were escorted by a retinue of thousands of other craft carrying officials, eunuchs and concubines. The line of boats is said to have stretched for a hundred kilometres, and tens of thousands of labourers towed them.

Kublai Khan's Minister of Water Conservation, Kuo Shou-ching, designed a new canal to be cut across the North China Plain where, in 1194, floods had caused the

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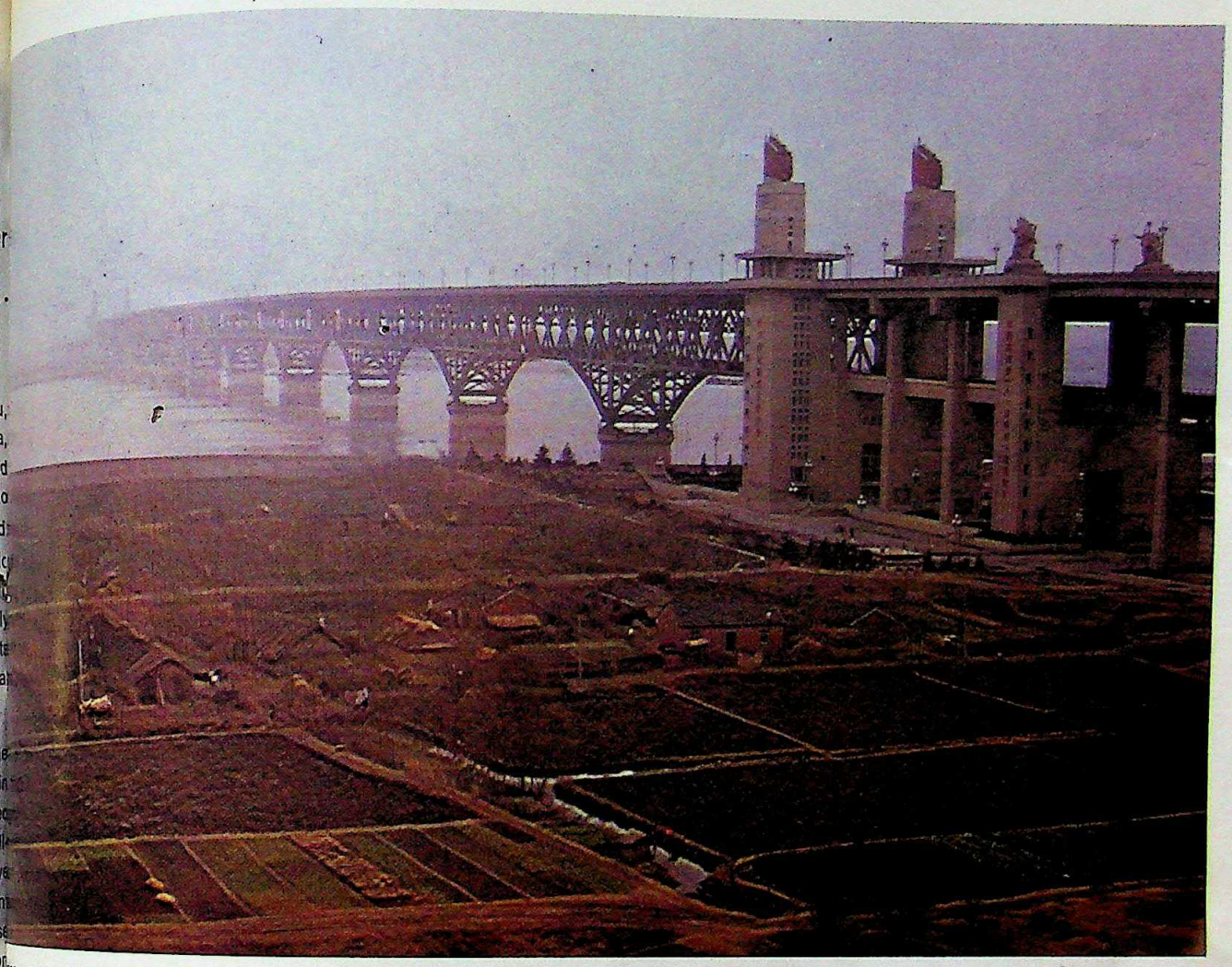

...e, near Nanking, across the mighty Yangtze, the third-longest river in the world. The Grand Canal crosses the Yangtze a few kilometres downstream from this point.

River to change its course disastrously, so that ...th lay more than three hundred kilometres farther ...outh. The remainder of the old canal was widened, ...ed and lined with stone. Trees were planted along ...th and a paved road ran along its bank. The ...mperor then linked Peking to the Hai River and ...mpleted the last sector of an artificial river system ...tended for one thousand, seven hundred and ... kilometres.

...89 the work was completed. Now the huge grain ... could set out from Hangchow, make their way ...lmost two thousand kilometres of the Yun Ho — ...nsport river' — and dock at the Imperial granaries ...he walls of Peking. Messengers could travel on ...ck from Peking to Hangchow in five days.

...chow, capital of the Southern Sung Dynasty, ...d in the thirteenth century and has been famous ... beauty ever since. An old Chinese saying ...bove there is Heaven. On earth there are Hang- ...nd Soochow.' Today, Hangchow remains a quiet ...wooded hills and gardens overlooking the calm ...e of West Lake, its shores lined with willows and ...e dotted with tiny islands graced with temples and pavilions. From Hangchow, the Grand Canal winds up through Chekiang Province, whose semi-tropical hills produce more tea than any other region of China. This delta land is also the centre of China's silk industry. Communes in the area raise millions of silkworms, each of which produces about seven hundred metres of thread.

The Grand Canal forms a moat around the city of Soochow, on the tip of Lake Tai Hu, and then moves northwards to join the Yangtze River. The Yangtze is the giant of China's rivers, rising in the wild mountains of the Tibet-Tsinghai plateau and flowing five thousand, six hundred kilometres to the East China Sea. One-tenth of the earth's population lives along its drainage basin. The Grand Canal crosses it about two hundred kilometres from its mouth, on the rich alluvial plains where the farmers can produce three crops a year.

The Canal then turns north-west, threading its way through marshlands and small lakes up to the Yellow River. For three thousand years the Chinese have kept records of the Yellow River, and they show that it has flooded fifteen hundred times and changed its course radically twenty-six times. Rising only a few kilometres from the source of the Yangtze, it makes a huge bend

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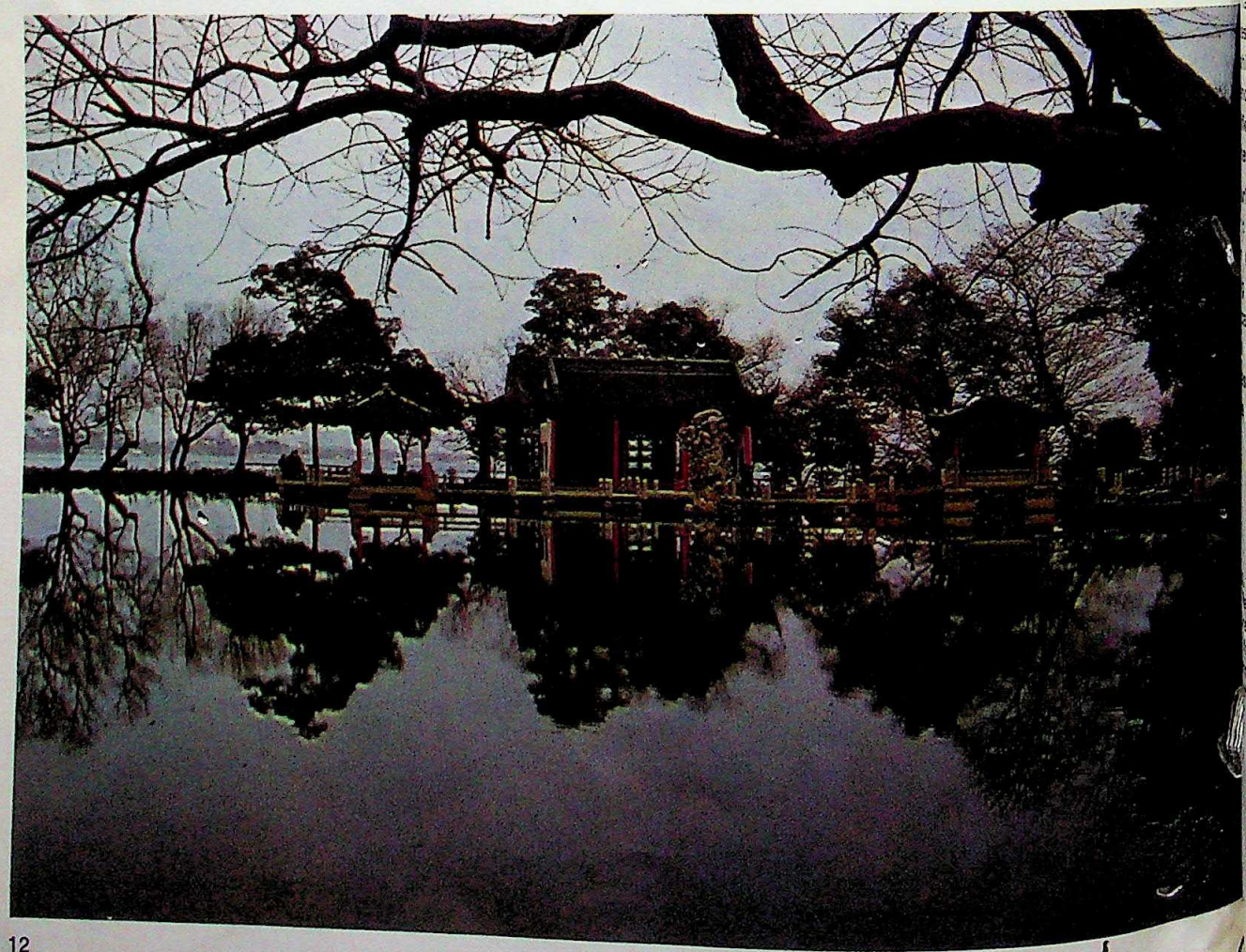

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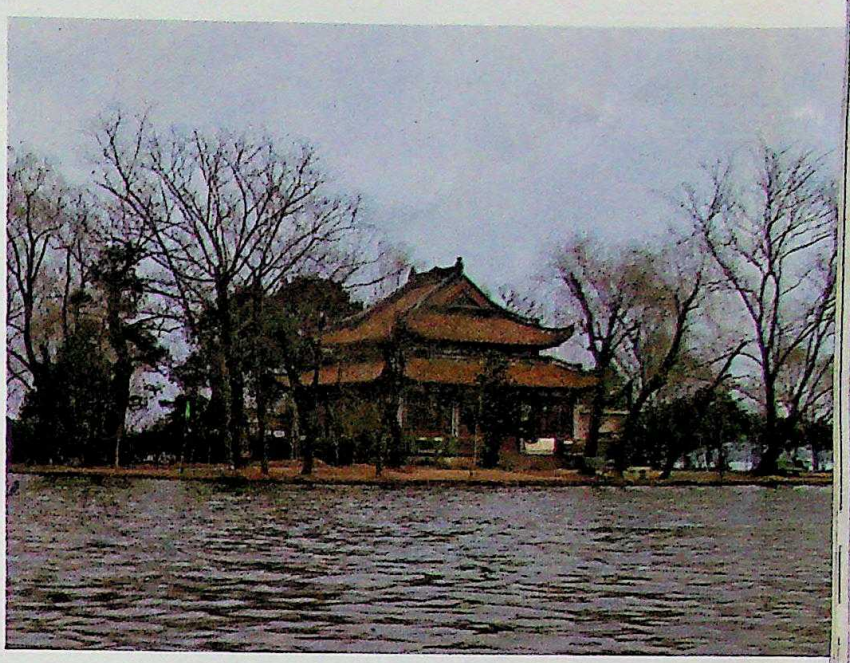
ugh the semi-desert, loess country of the north-west inces, carrying large amounts of silt with it. As the r silts up, the waters rise and the dykes along its s have to be raised. At some points the river bed re than four metres above the surrounding farmland.

om the Yellow River the Canal crosses the endless ess of the North China Plain to meet the Hai River west of Peking. Rebuilt by the hydrographer Kuo g the reign of Kublai Khan, this central section was mendous feat of engineering. The northern end was metres higher than the southern end, and the land ed to the east so that the Canal was often in danger ooding. Wide curves were designed to slow the ent and locks and weirs were installed to check the r levels. Teams of workmen using ropes and capstans ed boats up and over the sloping walls of these ; some of which were ten metres high.

om the Hai River the Grand Canal is known as the Yun Ho — the 'north transport river' — and actually s along a natural river that has been canalised and ated with locks. At the town of Tungchow the Grand l turns west towards Peking ,along the small Tung- Canal, the last section of this great inland waterway built.

a country where the main water routes flow from to east, the Grand Canal formed a north-south artery ior importance. It linked the rich southern pro- s with the northern provinces. Food supplies could pped not only to the capital but also to the armies ding the troublesome northern frontiers. It was a icant factor in the political and economic integration different regions of China.

ng times of peace, traffic on the Canal was always officials and their families were travelling to and their posts; wooden sampans ferrying passengers feeder canals far into the countryside; junks carry- rgoes of rice, cotton and livestock; and always the barges — about six thousand of them, twenty-five long and carrying fifty-five tonnes of grain apiece. southern delta regions fishermen travelled about in



above: The Tien An Min Gate, entrance to the Imperial king. The present capital was the northern terminus of nd Canal. Facing, below and right-hand column this ur views of West Lake, Hangchow. The city is at the n terminus of the Grand Canal, famous for its beauty e Southern Sung Dynasty founded it in the thirteenth century A.D.

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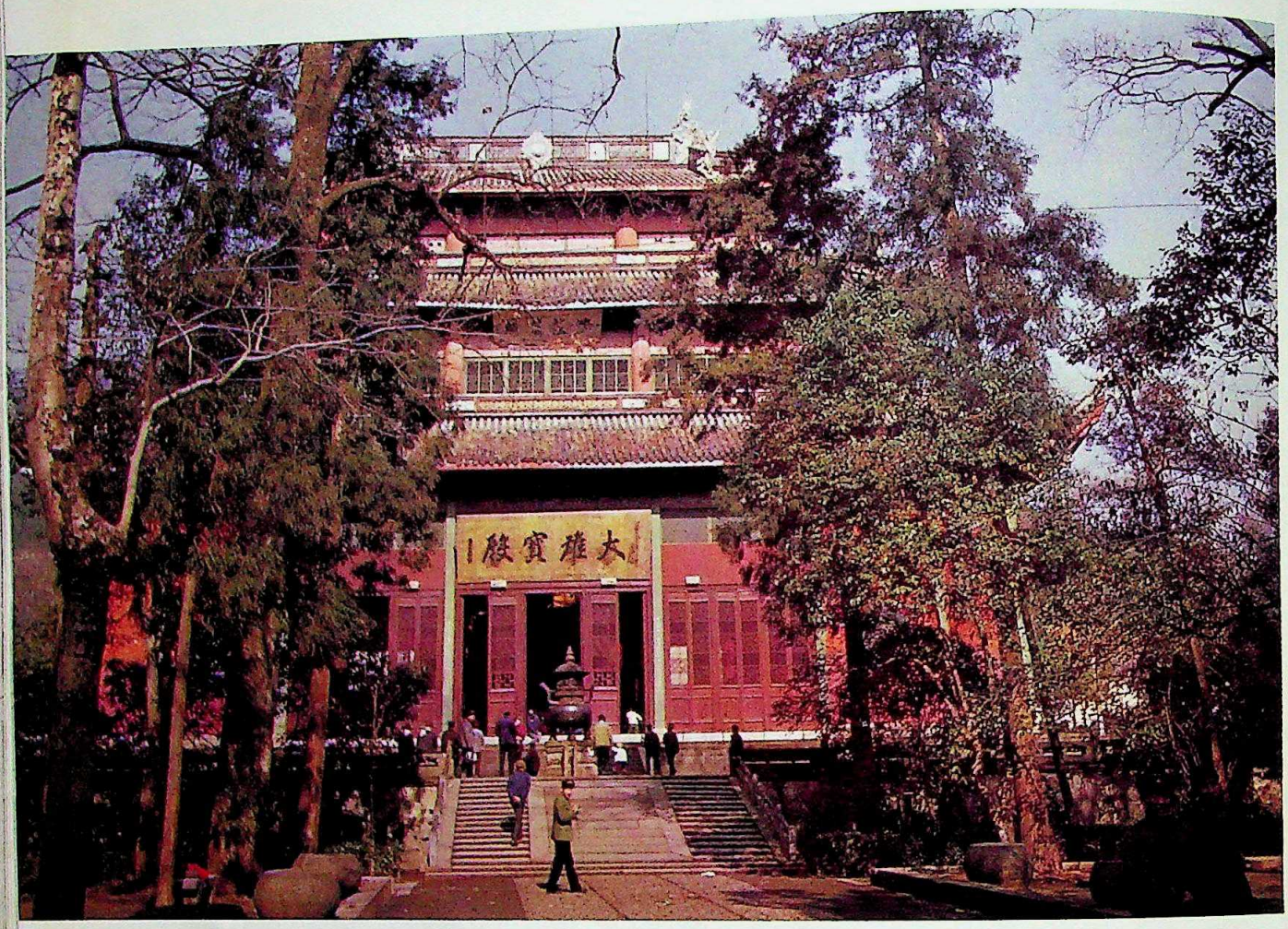
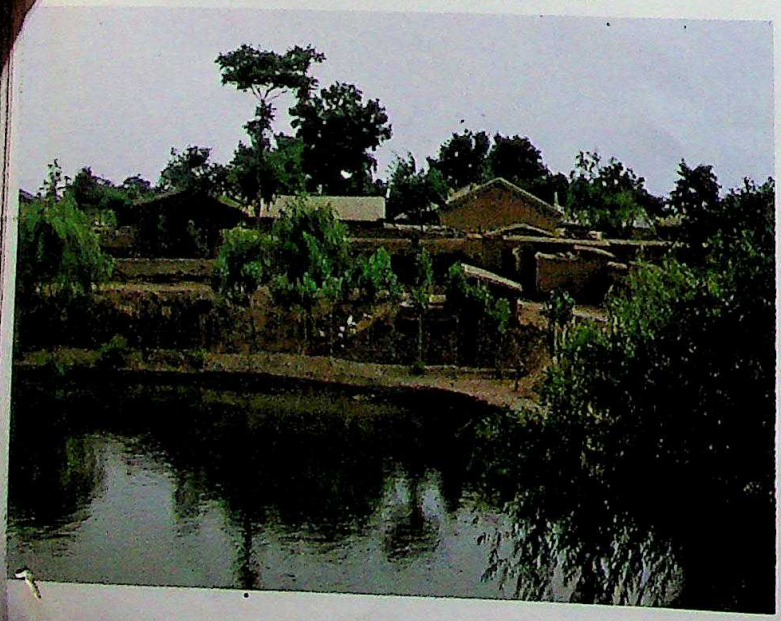


The Yun Lin Si — Temple of the Forest Clouds — overlooking West Lake, Hangchow, first built in the fourth century A.D.

Farmers' houses in Hopeh Province, where the Grand Canal crosses the North China Plain.



light skiffs by rowing with their feet or using pedals to turn a paddlewheel. (As long ago as the sixth century A.D., the Chinese had treadmill-operated paddlewheel boats operating on the Grand Canal. Some were fitted with up to twenty-three small paddlewheels and could travel almost fifty kilometres a day.)

At intervals of several kilometres the Canal was crossed by camel-back bridges with toll-houses on top. From his tile-roofed office an official lowered a bag on a rope to collect a toll from each passing vessel. Tolls were used to keep the Canal in good repair and to employ teams of men to pull the junks along stretches of fast water or haul them up and over the weirs.

In times of civil strife the 'transport river' was neglected. Dykes were lined with bundles of rushes instead of stones. The weirs and locks fell into disrepair. When water levels fell too low the grain barges had to be unloaded and the cargo transported in carts to the next stretch of deep water. Journeys often took so long that the northern waterways were frozen over before the barges could return south.

From 1800 onwards, the Grand Canal suffered increasingly from inefficiency and official corruption. By the

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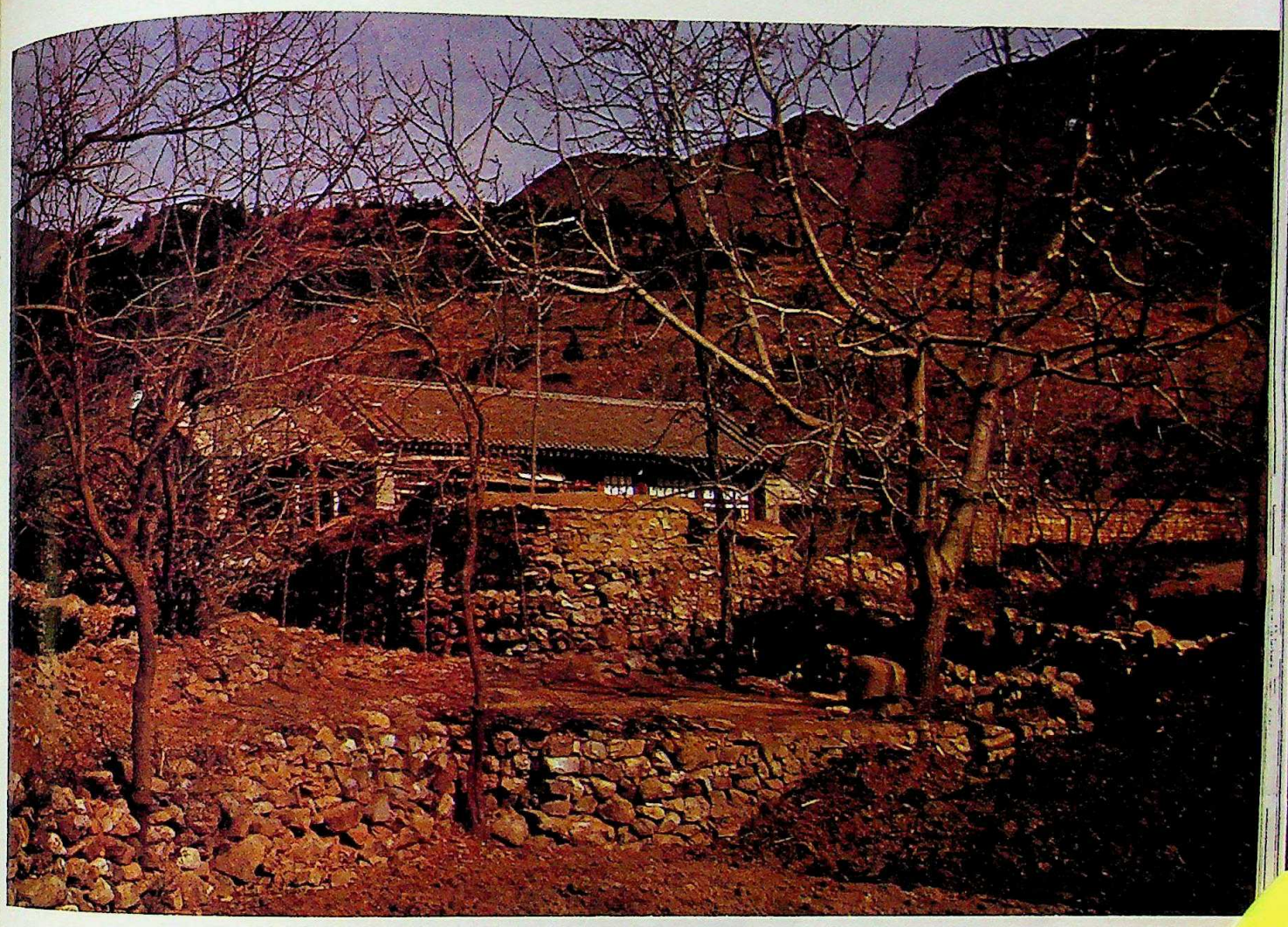

A farmhouse in Hopeh Province, near the Grand Canal.

ng of the twentieth century, its importance had ssened by the spread of the railways and the intro- of steamships on the coastal trade. When the s Republic of China was founded in 1949, only ections of the Canal remained in use. Then, in he giant waterway was reconstructed. Besides sed for transport it is now integrated into regional s for irrigation, fish production, hydro-electric and the supply of water to cities. Today, the Canal is again alive with shipping: tugs towing of loaded barges; launches ferrying passengers; carrying coal and ore from the mines to the es, farm produce to the city, manufactured goods e cities out into the rural towns and villages.

and peasant life has changed greatly over the es, yet much of the pageant that moves along the ansport river' today would still be familiar to that Wu who built the first segment of the Grand Canal , two thousand, five hundred years ago.

Tien An Min Square and the Great Hall of the People, Peking.

who has lived in China, has a continuing interest untry. All photographs are by him.

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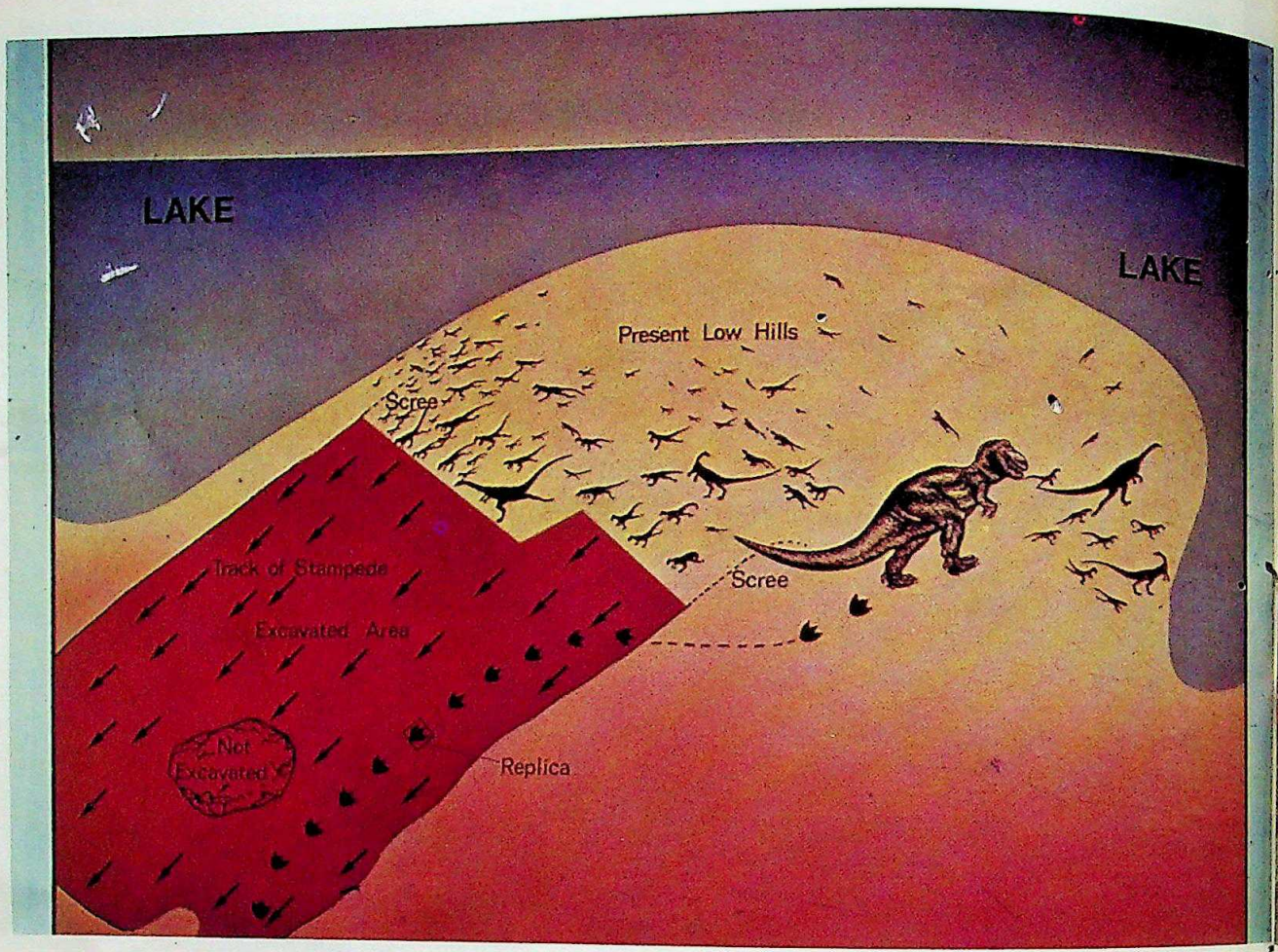

An artist's reconstruction of the scene of the stampede: a large ornithopod (a creature with feet like those of a bird — in this case, carnivorous) pursues the herd.

A MINUTE— A HUNDRED MILLION YEARS AGO

Mary Wade

To find out how dinosaurs looked we depend on their bones — but how actively did they move? The sloth-slow arguments of scientists have gone on for years: clumsy — agile — too bulky — quick-stepping like an elephant — heavy and clumsy — free-moving and speedy. The years drag out between publications. What do dinosaur footprints say?

The most exciting footprint-bearing slab we have seen was collected by the late Charles MacKenzie and his son Ron, both interested in natural history. It was presented to the Queensland Museum by Ron MacKenzie in memory of his father. Few of the sharp-sided moulds on it mark possible successive steps of one dinosaur. Nineteen bipedal individuals are indicated by unmatched prints or short sequences of two-three tracks. This was not a path but a forty-centimetre-wide strip of previously untrodden mud. Had we seen the slab when it was collected, the cry 'They are all going the same way!' must have been raised then, instead of several years later. It was raised by Tony Thulborn on a sunny June day in 1976, on a neighbouring outcrop where Ron MacKenzie and the Queensland Museum-American Museum of Natural History Expedition (1971) had independently found more tracks: 'They are right way up, there', said Ron. With Tony driving us on, we collected a slab twelve by seven feet, in fifty pieces. With it, we convinced the Museum director that big was beautiful, and went back to clear area for a large cast.

One day's hard work by the excavating party of three cleared a strip across the rocky promontory. The tracks of a least a hundred individuals ran virtually parallel, longitudinal to the promontory, and erosion cut off the

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The site of the find. (All illustrations by courtesy The Queensland Museum).

s on three sides. We still do not know how big the was. The area that parted most freely from the ourden was chosen for continued excavation, since racks were equally thick all over. Next day, volunteer er Malcolm Lark commenced the main excavation as later joined by museum assistant Errol Beutel): gan scraping sandstone from the footprints already ed. The tracks had to be emptied, as well as ered, before casting. The name Lark Quarry now emorates the fact that Malcolm Lark carried out half this excavation.

the end of the week we began to sweep away the s and fallen dirt, which had been left to protect hale while sandstone boulders were rolled across it. nd depression which had been taken for a pot-hole became one of a pair. In great excitement the rock emoved carefully from the second, and showed a three-toed footprint, as well as a track six metres and nearly two metres from its neighbour. Hasty ng of the first hollow showed a similar, rougher, ed pattern, and the search was on. As dark closed knew there were six footprints of a huge car- s dinosaur — a carnosaur — and that it was too o delay the departure of the Museum preparators coming to carry out the next phase of work. The quarry could not then be enlarged. Regrettably we all turned, next day, to cleaning tracks.

Cleaning tracks was the most fiddly part of the whole process; the yellowish sandstone filling was poked loose with blunt awls and brushed or blown from the tracks. By good fortune the area to be cast was where the fill was least hard. During my week's work on track-cleaning the bewildering variety of shapes had slowly come to order in my mind, and it was clear that two shapes of foot, striking the mud at angles from very oblique to almost vertical, had produced all the small prints. The size ranges of the two were the chief surprise. Each kind ranged from tiny tracks of bantam-sized individuals to, in one species (a cœlurosaur), the size of a small emu, and in the other (an ornithopod), an ostrich-sized creature. Large and small, the tracks ran side by side or on top of one another, without regard for size or species, and some of them ran across the tracks of the large carnivore. All were headed away from a one-time lake, (indicated by shale replacing sandstone), the place the carnivore had approached.

All three species are bipedal dinosaurs. They were digitigrade, they walked on the ball of the foot (the

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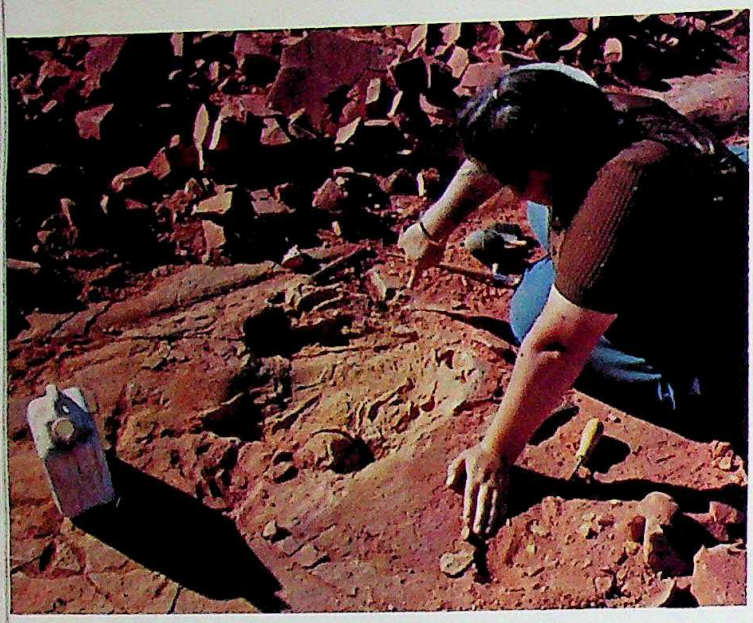
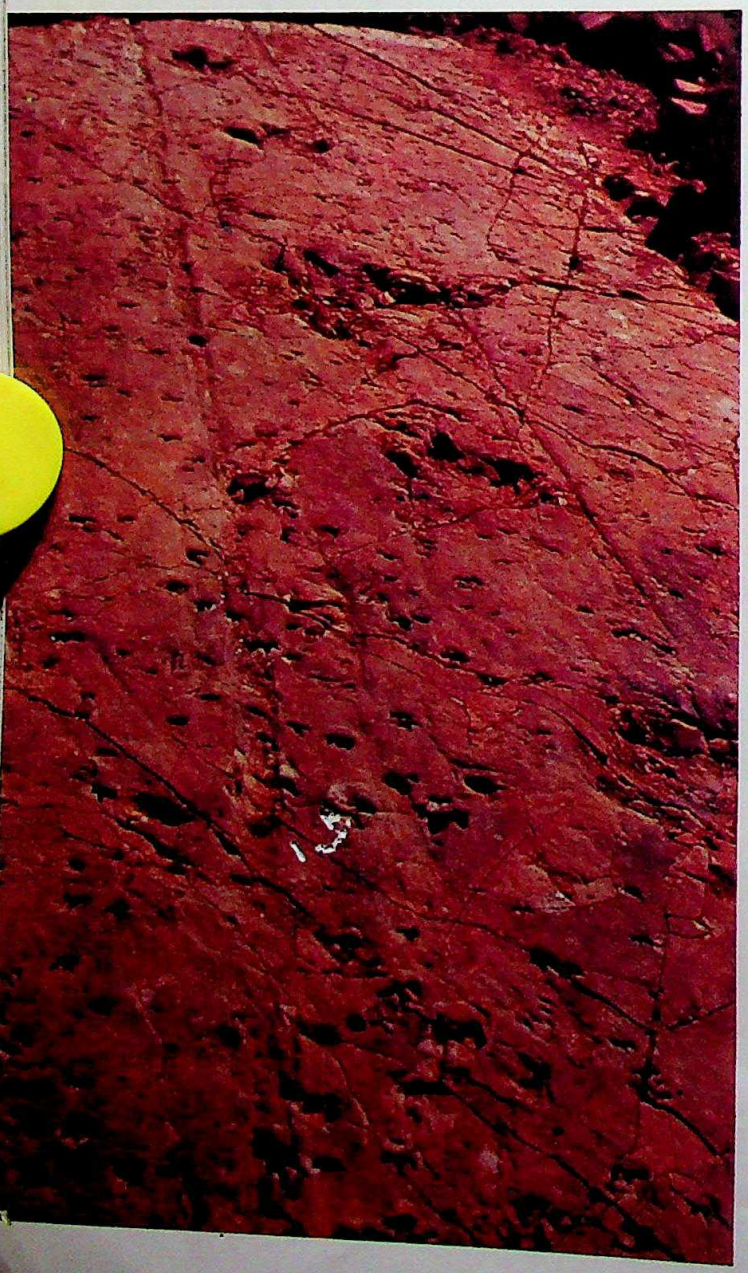


A worker on the site cleans an imprint of one of the pursuing carnosaur's feet, the size of which is contrasted below with the tiny imprints of the dinosaurs.



tarso-metaphalangeal joint) and the digits. In running they tended to rise onto their toes, as we shift from the heel to the ball of the foot. There are no running tracks for the carnosaur but its weight probably kept the tendency incipient. Weight was not a limiting factor for the smaller species. Where one animal was hindered by another, it touched the ground with the ball of its foot, but most of the prints are toe prints only: that is, running prints. The portion that we have excavated shows an established stampede, with all animals headed the same way, deviating or checking speed when they jostled, and accelerating again.

Lark Quarry and the Charles MacKenzie slab are separated by a hundred metres or so, but the direction of flight is the same, and the dip of the shale layer, projected across a valley, appears to bring the Lark Quarry surface down to the classic locality. Drainage is through the shale layer at this spot, for it is near the bottom of a hill. The shale has weathered to clay as a result, and the moulds of the footprints and the same kind of sandstone as the fill we laboriously removed on the promontory, stand free.

The shales that indicate the lake may be laminated or massive; the particular one that bears the tracks is laminated, has a broadly fluted surface, and bears drag marks, scour marks and several generations of prints. Oldest are rather deep, poorly preserved tracks, probably all of fairly large ornithopods. These are filled with water-laid sediment, as are some other depressions, and were presumably trodden by animals walking in the shallows. Second are the tracks of the largest known ornithopod. This walked oblique to the broad fluting at a time when the highs were exposed soft mud, but water draining along the bottoms of the flutes scoured its low-lying tracks. Later still, the carnosaur crossed the quarry area. Its footprints are not sharp because they were tramped right through the clay, and its weight was carried by the sand below. The displaced mud did not squelch up around its feet, but moved laterally, doming the surface mud without cracking it: this provides clear evidence that the surface mud was plastic, neither very soft nor hard at the time. Finally the sharp, deep tracks of the smaller dinosaurs also testify to their crossing the scene while the mud was equally plastic, and superposition shows that they were the last.

It is possible to reconstruct the scene as we look at the known facts. This was in the time before grass had originated. Ferns were the main ground cover but some leaves in the sediment indicate bushes or small trees of early angiosperms, flowering plants. Some fossil wood and impressions in the shales indicate a few conifers and large, reedy plants called equisitales. There is a lack of coarse sediment and ubiquitous small sets of crossbedding in the sandstones, together indicating a lowland where most sediment was shifted by sheet floods.

There was an expanse of mud by the lake, and a large number of cœlurosaurs and ornithopods of all

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The tracks of two different cœlurosaurs (three-toed animals) deeply cut in the mud.

s came from that direction. We have not been able xtend the quarry far enough into the hill to study ecord of the formation of the mob. It is not at all that they would have formed a close-knit group ut being disturbed, and even less likely that a large saur could approach them in the open without bing them. Renewed excavation in 1977 showed the saur walking freely toward the lake, and turning dly to its right. (Its further tracks have been des- by a small valley.) Next, the stampede poured the quarry area which extends six metres past the saur's turn. That the dinosaurs were packed into o against the lake is clear but there are two pos- es for the trap: either the lake shore may have d into a point, and allowed one carnosaur to trap or there may have been a pair of carnosaurs. A valley to the east and the scree cover on the hills west to north prevent us from mapping the shore- and no-one has demonstrated that carnosaurs hunted rs. The likely duration of the episode is about half ute to one minute, depending on how far the away point was from the established stampede that ee.

The scientific results of the work are becoming satisfactory. Despite the frequency with which animals trod on each others' tracks, it is possible to estimate the numbers of animals accurately (a hundred and thirty in addition to the missing edges of the mob) and work out some long tracks. These enable us to see how freely the animals moved. The carnosaur was walking up on the mob, not charging, at the time recorded; its tracks enable us to calculate its leg-length (2.7 m to the hip-joint) and probable speed (9 km/hr). The agility of large carnosaurs has been the subject of long argument. These eleven footprints show an animal which placed its feet substantially in front of each other, like a man, and accomplished a 90° right turn in two steps, though it started with the left foot. Its walking steps cannot offer the support that its charging steps might to the extremists in the 'agile' school of thought, but they certainly rule out the waddling gait supposed by the 'clumsy' school of thought. Its steps averaged 1.7 m. For its size, it appears to have been about as competent a walker as a man. The stampeders, however, were mostly running on their toes and as yet their foot-lengths and correlated leg-lengths are not certain.

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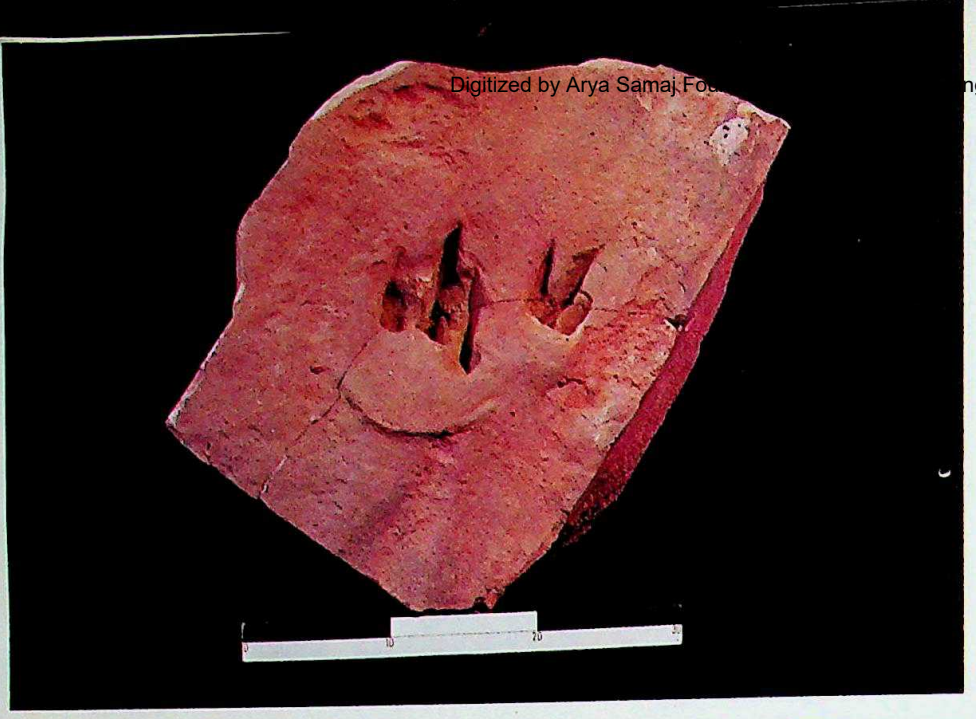

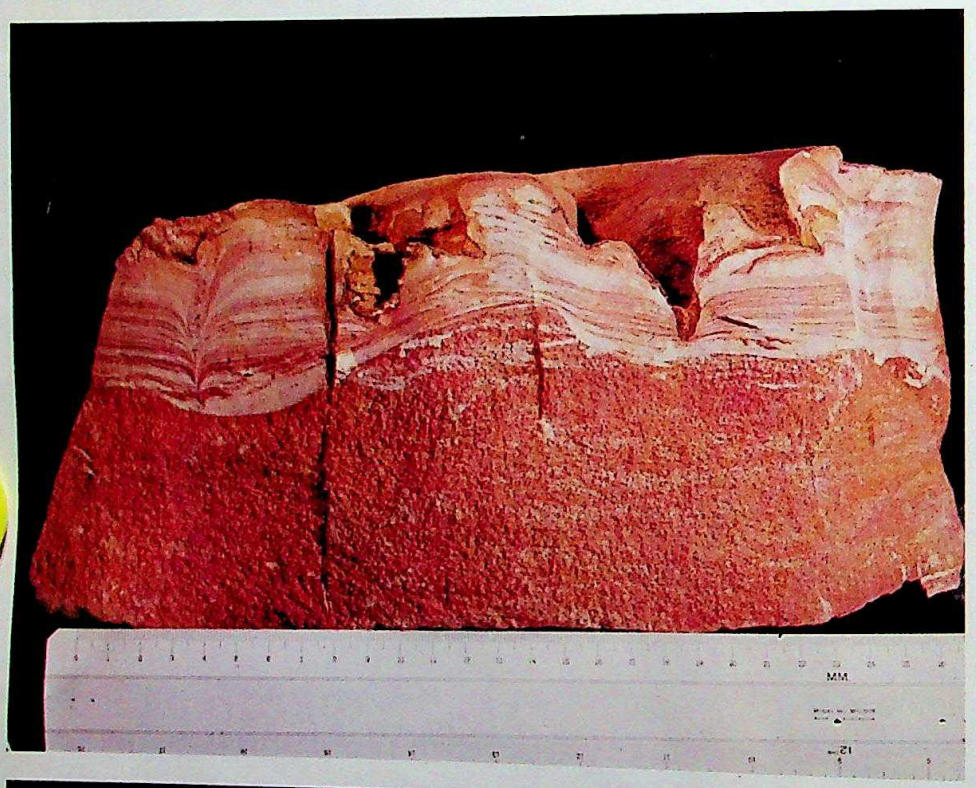

Top: A slab of rock with cleaned tracks
centre, a transverse view of two cœlur
saur footprints and the slab named a
the late Charles Mackenzie, who,
his son, discovered the site. This 'mos
exciting footprint-bearing slab' was pre
sented to the Queensland Museum by
Charles Mackenzie's son in honour of
his father.

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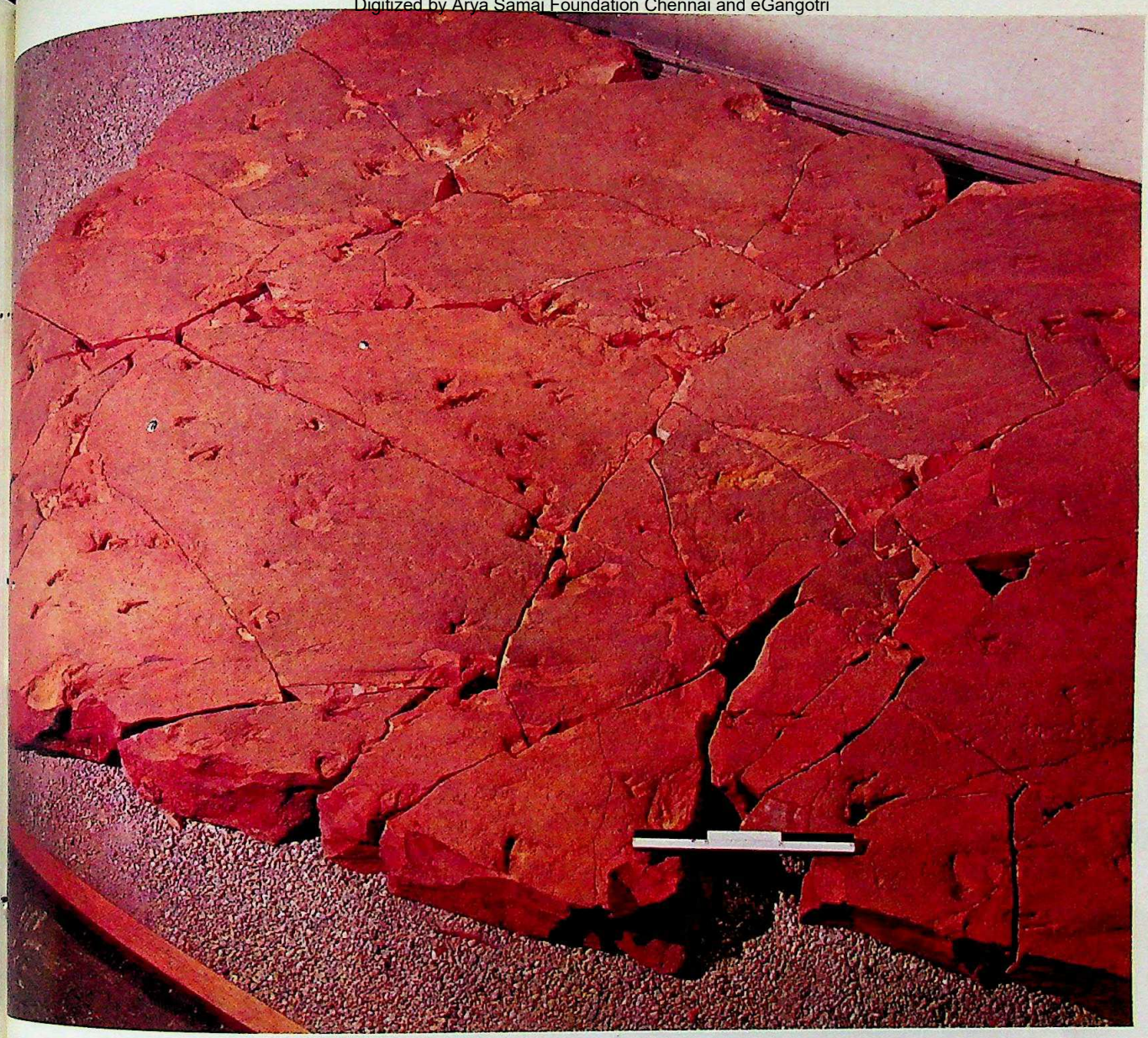

The Lark Quarry slabs on display at The Queensland Museum.

...e tracks of the two smaller species show very dif-...nt foot-shapes although their size overlaps so much. ... cœlurosaur has three slender toes, the centre toe ...g the longest, and usually leaving the deepest im-...ssion. This is the commonest species. It probably ... insects, eggs, tiny reptiles, carrion, and possibly ... some vegetable matter. The larger species has three ... large, short toes, of which the middle one is ...dedly the largest, and the fourth, a tiny toe, is pointed ...wards. This was an ornithopod, a vegetarian dino-... The largest of these has triangular footprints about ...t long and wide. It took steps of 1.7 m like the ...saur, but must have been more lightly built as its ... were only half as large. The skeletons of all these ...res are unknown; only one claw attributed to some-... like the big carnivore was previously known from ...alia.

...rely, the tracks of vegetarian dinosaurs moving as a ... have been found. The greatest number previously counted was twenty-six auropods in one group. Most dinosaur trackways show random movements of individuals, even though large numbers of prints may be found in one spot, as in Oakleigh Colliery, Rosewood, Queensland. The Lark Quarry dinosaurs are therefore the largest mob known to date; they have attracted world-wide attention for this, and for the brief instant of geological time they reveal. Of greater interest to science will be whether the size distribution within the species approximates a natural distribution, the speeds at which they ran, and how far the animals could run flat out without pausing. We can expect the suggestion that the Charles MacKenzie slab shows part of the Lark Quarry stampede to be disputed, for some workers view the dinosaurs as capable of no more than a series of short dashes, like modern cold-blooded reptiles.

Dr. Mary Wade is Senior Curator (Geology) at The Queensland Museum, Brisbane.

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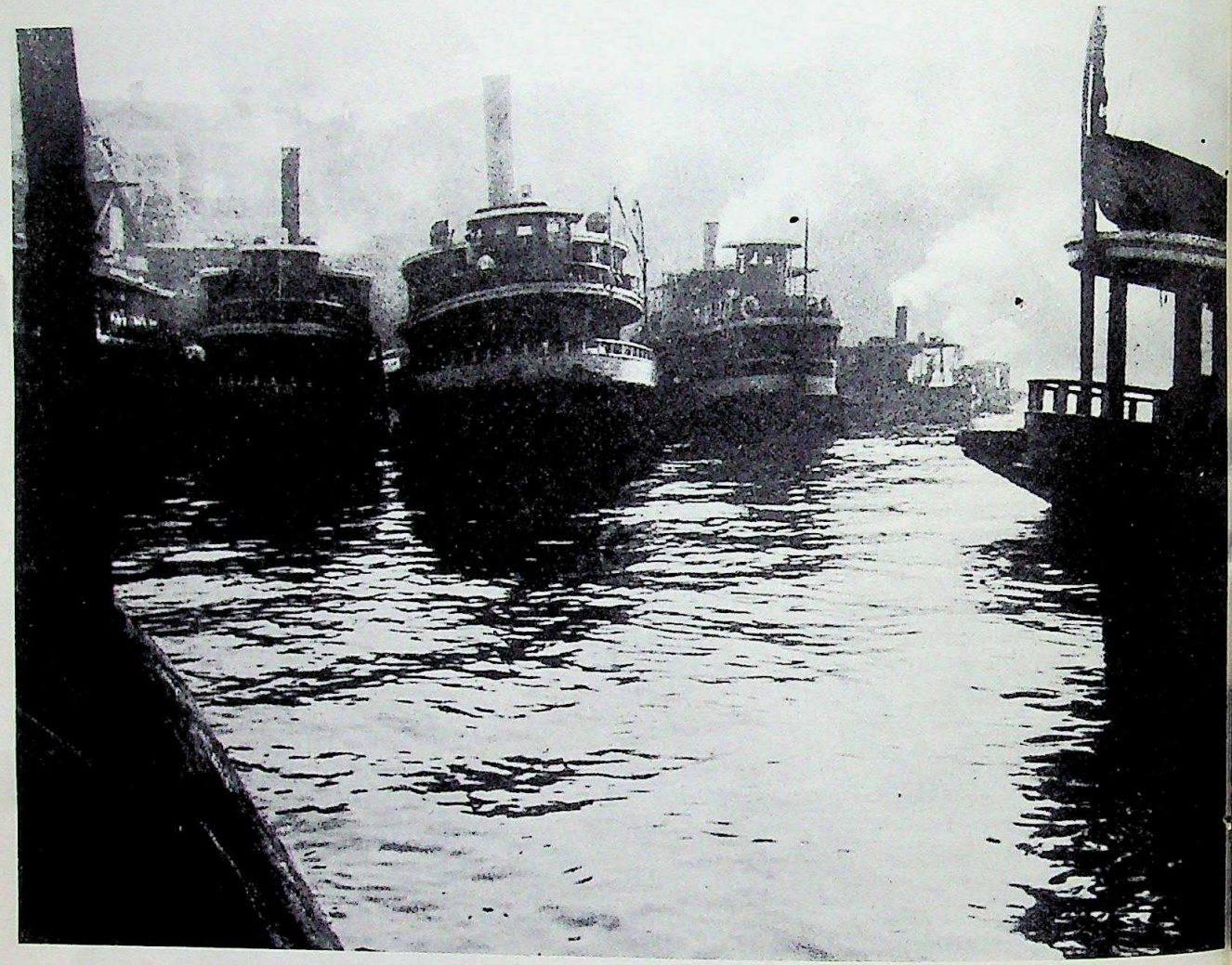

THE PAINTER WITH A LENS

LEAFING through the photographs in the book called, simply, *Cazneaux,* the name of one of one's Box-Brownie heroes of childhood, is like having a school holiday back in the Sydney of one's boyhood days, and, in some cases, in the adolescence of one's father. The book is a selection of photographs by Harold Cazneaux (1878-1953) which in themselves were romantic enough, but the slight haze that goes with them reminds one of the horse-drawn cabs, the giant Clydesdale horses that pulled the drays.

The book has been put out by the National Library of Australia (ISBN 0 642 99125 1) and the works in it have been chosen from the Library's collection by another, but somewhat younger, outstanding photographer, Max Dupain, who has also written an appreciation.

Max Dupain explains better than I, in using the word 'romantic', exactly what was the charm, and what was lacking in Cazneaux' photographs of people and landscapes and industrial scenes:

I think one of the tragedies of photography in this formative period was lack of background and an isolation from Europe and America and the great traditions. We had little or no yardstick against which to measure or contrast our achievements. Caz in his letters recalls 'that great photographer, Steiglitz. . .' He does not tell

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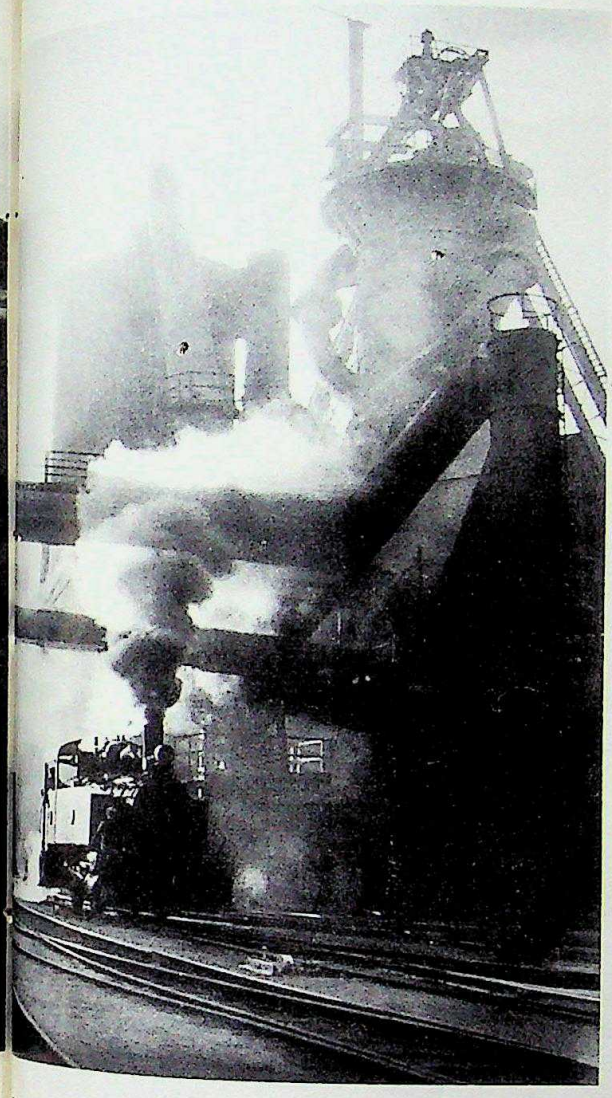

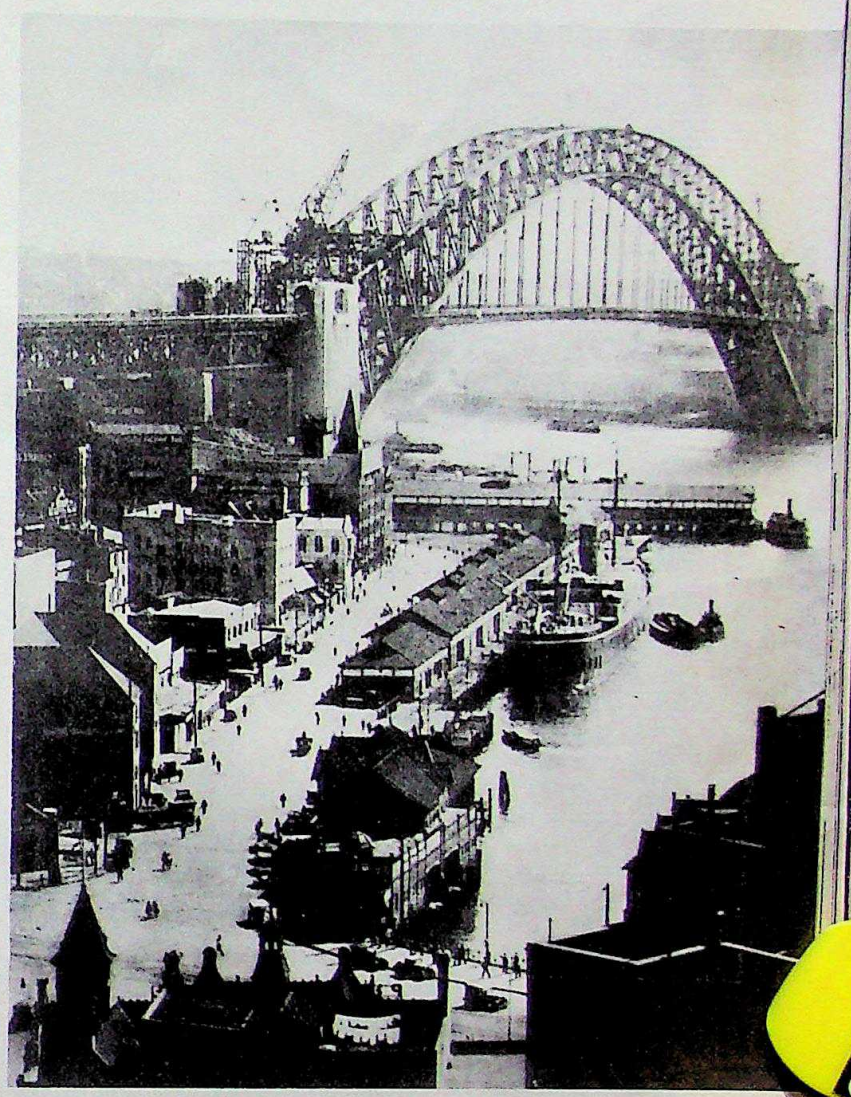

hat Steiglitz opened the Photo-Secession Gallery New York in 1905 and showed the public for the time the work of the Cubists, the Fauves, *Picasso many other revolutionary painters . . . What mental ulation!*

viously we had not heard about those develop- ts in Australia, any more than we had heard about ard Weston . . . These devoted people had no ence on Australian photography until the 1930s . . . insular we really were in this country.

admitting all this, we have to thank Harold eaux for so much. His work is what matters, its e in the history of Australian photography and its ence on past, present and future generations of ographers.

also an irreplaceable and highly artistic record of when Sydney was a friendly port on the Pacific a small city in its own untidy right, where P. & O. ailed majestically past the luggers and the coastal to Circular Quay with the great Bridge still ete, when farmers, like the one in our frontispiece, wore flannel singlets all summer long for protection against chest trouble, where the ferries still got up steam in the cool early mornings for their days of plying across the Harbour, and the great steelworks of Broken Hill Proprietary Ltd. still used steam locomotives.

There are echoes of that old S[illegible]ney, and even the Sydney of the 1930s in this book: the girls in long dresses, the short back-and-sides haircuts of the men and women under the arcades of the G.P.O., whose polished granite pillars still had a no-smog shine on them and flower-sellers sitting patiently by their trolleys in Martin Place. The book's portraits include one of the old art teacher, Julian Ashton, and photos of gracious buildings like Burdekin House, which was the subject of one of the first conservation rows in Australia, when its demolition was threatened—and carried out—in the 1930s.

Cazneaux has left a slightly misty, somewhat sepia-toned family-album of quality about it all.

ROBERT FERRIS

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در نهان دختر گدا را خواند و گفت | چون تویی را چون منی کی بود جفت

قصد تو دارند برخیز و برو | بر درم منشین و بگریز و برو

آن گدا گفتا که من آن روز دست | شسته ام از جان که کشتم از تو مست

صد هزاران جان چون من بیقرار | باد بر روی تو هر ساعت نثار

چون مرا خواهند کشتن بی صواب | یک سوالم را به لطفت ده جواب

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A BORN STORY-TELLER

John Andrew Boyle

F THE TADHKIRAS or collections of biographies of Persian poets the earliest is the work of 'Aufi com- in India *ca. 1220* and the most famous that of -Kat-Shah dating from 1487. These works have been cribed by the Czech scholar Jan Rypka as the 'first genous attempts at a history of literature' and 'an luable source of information despite their primitive e and lack of accuracy'. While, however, they do serve a great deal of material from works now lost s, they need to be consulted with a great deal of on.

eir authors seem in particular to have no conception hat is chronologically possible or impossible and are consequence capable of the wildest anachronisms. the death of so famous a poet as Farid al-Din 'Attar riously given as occurring in the years of the Hegira sponding to 1193, 1200-1, 1205-6, 1222, 1229-30 and . Of these dates all but the first and last are taken Daulat-Shah: they are all of them inconsistent with wn elaborate account of the poet's death in the sack shapur by the Mongols, which occurred in the spring 21. According to this account 'Attar's Mongol captor about to put him to death when someone offered him housand pieces of silver to spare the poet's life. persuaded his executioner not to accept this sum e ground that he was worth a great deal more.

ittle later, when the Mongol was again on the point ling him, another person came up and offered a sack raw for his ransom. Upon which 'Attar said to the gol, 'Sell me now, for that is exactly what I am worth.' the Mongol, mad with rage, struck his head off. rding to a later variant of the story, 'Attar then took ead in his hands and ran round for a while compos- he *Bisar-nāma* ("Book of the Headless One"), one of pocryphal works! That the poet may have perished e massacres that followed the capture of the town hich he had passed the greater part of his life is in itself likely enough; but one could wish for better evidence than this extravagant tale.

On the date of his birth we are equally ill-informed. According to some of the *tadhkiras* he was born as early as 1117-18, in which case, assuming that he met his end in the sack of Nishapur by the Mongols, he would have reached an age of 103 or 104; his longevity would be even less credible if we accepted the later dates for his death. Weighing up all the evidence the late Professor Said Naficy arrived at the conclusion that 'Attar was born *ca.* 1142.

For the details of his life we must rely upon the internal evidence of his own works. This evidence is less plentiful than was formerly assumed because the two poems which provided the most biographical data have now been shown to be worthless forgeries. We know from his very name that he was a druggist or apothecary. The *'attar,* literally a dealer in *'itr* (attar of roses), kept a shop in which he received patients, made up prescriptions and sold perfumes and spices. The poet tells us himself in his *Khusrau-nama* ('Book of Khusrau') how he composed two of his poems, the *Musibat-nama* ('Book of Affliction') and the *Ilahi-nama* ('Book of God')—poems consisting of some eight thousand and seven thousand lines respectively—at a time when he was feeling the pulses and attending to the needs of five hundred patients daily. We may, not unreasonably, assume that he wrote all of his works in similar circumstances in one of his shops—for he seems to have had more than one—in Nishapur and its suburbs.

Though he was also the author of lyrical poetry 'Attar's fame rests upon his mystical epics, the *mathnavis,* as they are called in Persian. The first to be composed was the *Asrar-nama* or 'Book of Secrets', distinguished from the later poems by its smaller size and the absence of a framework story. The second—and by far the most celebrated—is the *Mantiq al-tair* or 'Speech of the Birds', completed according to the colophons of two manuscripts in January 1178. The title is derived from Chapter XXVII of the Koran, in which Solomon declares: 'O men, we have been taught the *speech of birds,* and are endued with everything . . .' The poem describes the quest of the birds (i.e. the Sufis) for their king, the mythical Simurgh

darvish kneeling before the princess.

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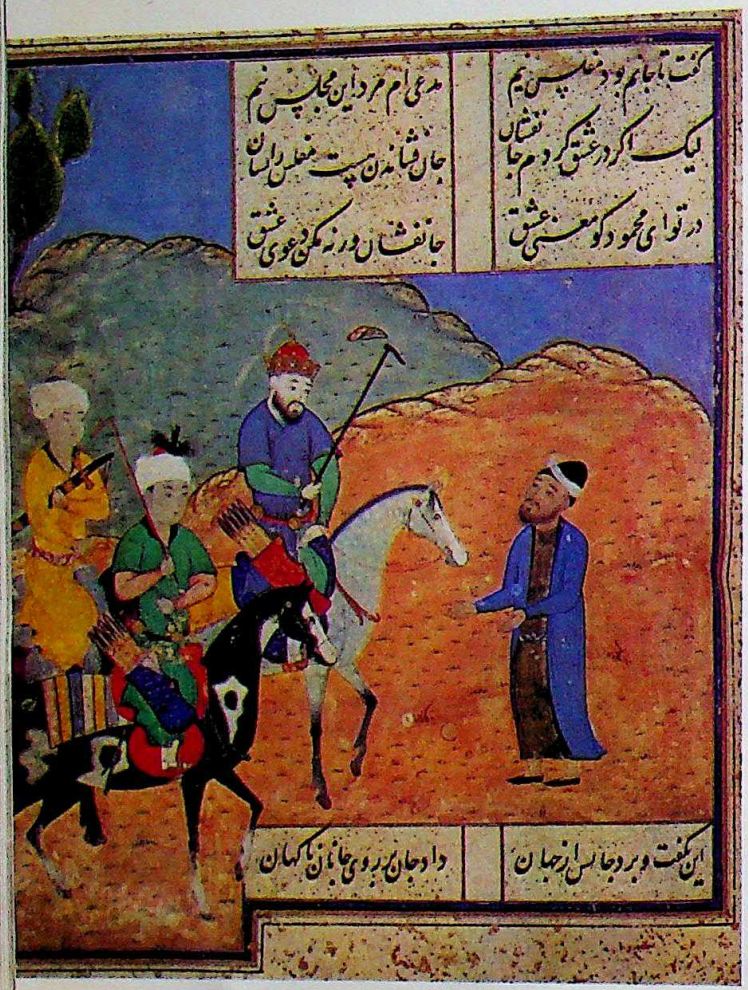

A darvish waylaying Sultan Mahmūd of Ghazni and Ayāz on their way to play polo.

or Phoenix (i.e. God). As their leader in the search they elect the hoopoe, who had guided King Solomon across the desert to the Queen of Sheba, and who describes the long and hazardous journeys they must undertake through seven valleys (representing the seven stages of Sufism). Many excuse themselves and draw back; and of those who finally set out only thirty birds *(si murgh)* succeed in entering the presence of the Simurgh, to discover that in so doing they have lost their identity that they are he and he is they. In this way the poet allegorises the final stage in the Sufi's progress, 'annihilation in God'.

The theme of the *Musibat-nama* or 'Book of Affliction' is similar to that of the *Mantiq al-tair*. A Sufi disciple wanders through the universe holding converse with all manner of mystical, cosmic and physical beings, to throw himself finally into the sea of the soul and discover that he has become at one with God. The *Musibat-nama* provided the model for a famous modern work, the *Javid-nama* of Iqbal, the poet and thinker of Muslim India and the spiritual father of Pakistan.

The *Ilahi-nama* or 'Book of God', completed according to the poet's own testimony soon after the *Musibat-nama* is perhaps to be regarded as the last of his genuine works. For a summary of its plot I cannot do better than quote the late Professor Arberry in his *Classical Persian Literature:*

> *The Ilahi-nama tells the story of a king who had six sons, whom he invited to reveal to him their dearest wishes . . . Each son confesses in turn his heart's ambition. The first prince dreams of marrying the daughter of the King of the Fairies; the second wishes to possess all magic science; the third would own Jamshid's world-revealing cup; the fourth craves to discover the Water of Life; the fifth is ambitious for the Ring of Solomon; the sixth longs to know the alchemist's secret of converting dross into gold. The king's reply to all his sons is the same, though worked out with a variety of well-recounted anecdotes: their hearts are fixed on material and transient things, whereas true happiness is only to be attained by pursuing the spiritual and the eternal.*

These latter three poems, unlike the *Asrar-nama*, have a main or framework story into which are fitted a number of subsidiary stories recounted to illustrate or reinforce a point in the argument. For his material the poet draws not only upon the Koran and the Traditions of the Prophet and the *Shah-nama* or 'Book of Kings' of Firdausi but also upon works of popular literature which in the Middle Ages were equally familiar in East and West; the Alexander Romance,* *Barlaam and Josaphat* and the *Book of Sindbad (The Seven Wise Masters).* Of folk tales in the strict sense we find in the *Mantiq al-tair*, as was already noticed by the pioneer folklorist Sabine Baring-Gould, a curious variant of the William Tell legend, and in the *Ilahi-nama*, a still more curious version of the Tale of the Sorcerer and his Apprentice.

The *Mantiq al-tair* was translated into French by Garcin de Tassy in the middle of the last century, and FitzGerald, the translator of Omar Khayyam, produced a 'brief but masterly epitome' of it under the title of *The Bird Parliament.* The *Ilahi-nama* is now also available in French and English, and it is possible, even through the mirror of a translation, to appreciate the poet's gift as a story-teller, a gift which he shares with other Persian poets, and also the much more rare gift of expressing difficult and abstruse ideas in clear and simple language.

In the *Ilahi-nama*, permeated as it is with the idea of *zuhd* or asceticism, a concept taken over from Buddhism, the world is compared in one place to an ugly old woman clad in a hundred-coloured robe who had taken and killed many husbands. 'Abbasa of Tus, said to have been 'Attar's teacher, is made to describe it in the following Manichaean terms:

> *The world is in reality like a pile of carrion thrown on to the rubbish heap. When the lions have eaten their fill of this carrion, the panthers come and fall upon it. When the panthers have eaten and departed, there arrive great numbers of dogs and wolves. When only a little is left, flocks of crows fly in from every side. The crows eat these remains, and there is left only a little dung and blood. Then comes a blackbeetle*

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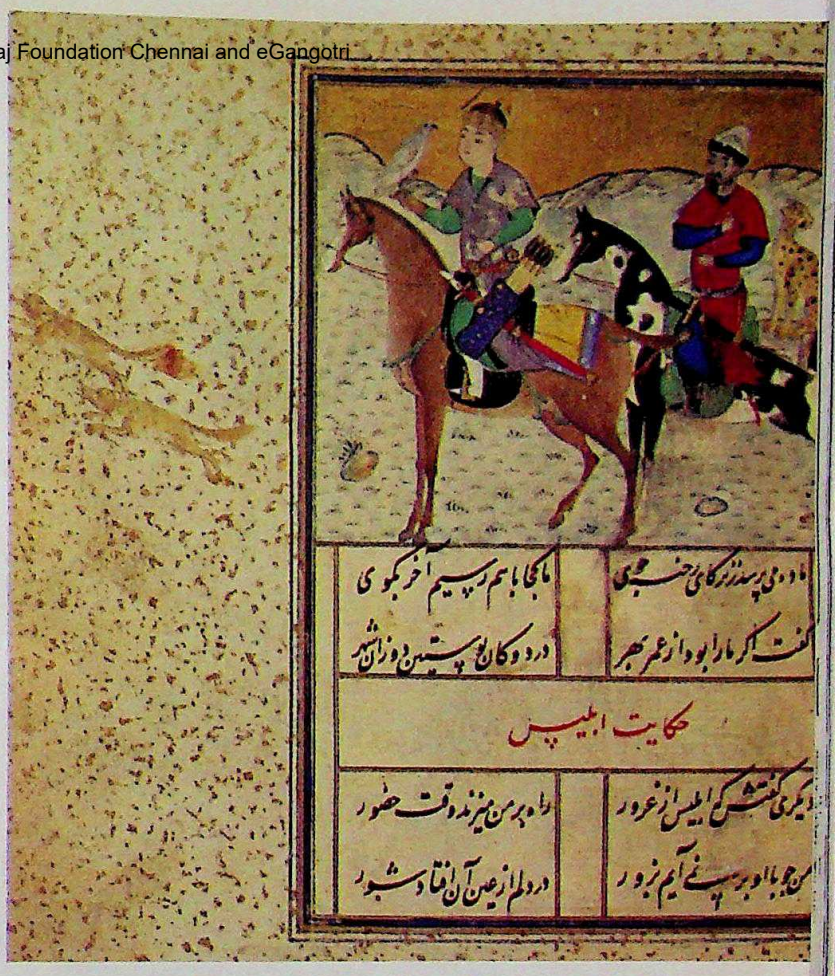
d turns this dung and blood over this way and that. en nothing is left but a fleshless bone the sun shines ccely upon it; a little fat oozes out and swarms of s run up from every side. When the ants have eaten t fat, nothing is left on the roadside but a dry bone. The lions, 'Abbasa goes on, *are the kings, the pan- ers that go after them are the emirs. The dogs and ves are their followers and the crows their under- gs. The blackbeetle is the tax-collector at work, and for the ants they are the hangers-on of all these ople.*

t if the world is worthless, so *a fortiori* are the goods e world, nor are men the real possessors of these ds, as is demonstrated by Buhlul, the 'wise fool', a mporary of the Caliph Harun al-Rashīd. Buhlul is d in a cemetery beating the tombs with a stick until stick breaks. Asked to account for his behaviour he es:

These departed ones uttered lies without number and en went to sleep. This one said: 'My palace and my llion'. That one said: 'My goods and my gold'. This e said: 'Behold my fields and my vineyards'. That e said: 'Behold my garden and my water tank'. But d said: 'All these claims are not lawful, for it is all inheritance, it is not yours' . . . Therefore I beat em without pause for food or sleep, for they are thing but a handful of liars.

wards the rulers of the world 'Attar, like most of the s, adopts a critical, not to say hostile attitude. lls many tales of Sultan Mahmud, the conqueror of being admonished or rebuked by humble folk whom ncounters while hunting or campaigning. Buhlul, the fool' is represented as reducing the great Harun shid to tears. Coming face to face with Harun as sses along the road Buhlul greets him in familiar by his first name *tout court*. Harun is incensed and 'Dost though not know me, madman? Shall I spill lood on the ground forthwith?' To which Buhlul s: 'I know thee well. This is who thou art: If in the here is one old woman left who stubs her foot against e, or if somewhere a bridge is broken and a goat its foot, though thou art in the West, it will be ed against thee. Fear, O heedless, lest thou be ht to reckoning'. Harun weeps long and bitterly and offers to pay Buhlul's debts. 'Wilt thou pay debts debts?' asks Buhlul. 'For thou hast not a single grain own. Thy wealth is the people's wealth; none of oney in thy treasury is thy own. Go, give back the s' property to them. Who told thee to take from e and give to that?' Harun then asked Buhlul for a of advice and is told to remove from his face the of hellfire. Harun claims that, if all else fails, the ession of his kinsman the Prophet will save him the consequences of his sins. Buhlul, however, his claim with quotations from the Koran, and turning to his following, exclaims: 'Ride on. This as killed me, and you know nothing of it.'

Sultan Sanjar, the last of the Great Seljuqs, the is administered by the Sufi shaikh Rukn al-Din ibn



The story of two foxes and, below, the Angel Jibrā'īl (Gabriel) sees a man kneeling before an idol.

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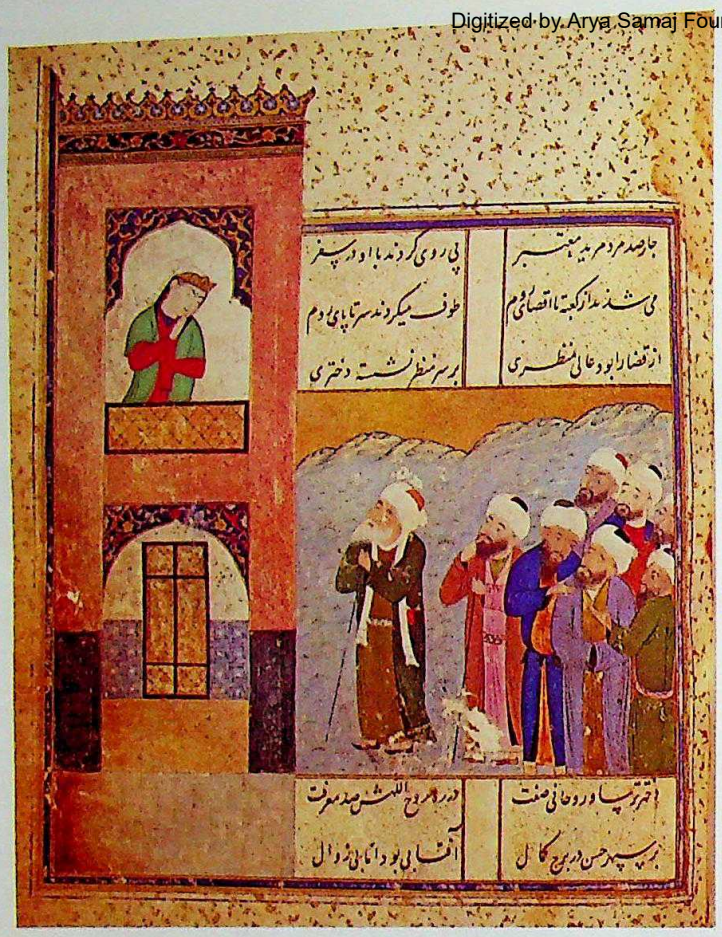
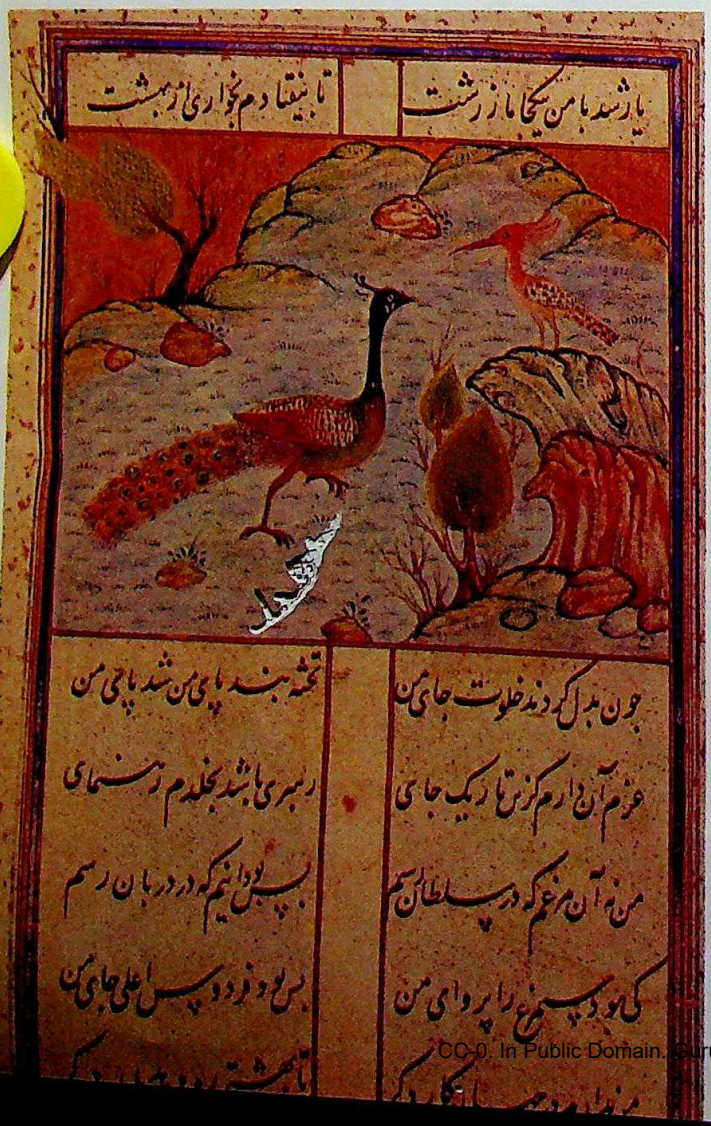


Shaikh San'ān and the Greek Christian girl, and the hoopoe and the peacock. In search of their king, the Phoenix.



'Art thou not ashamed, O king, of thy sovereignty? For a poor old woman cannot prepare herself a dish of fried onions without thy extorting some part of it in some way.' Said the king: 'O shaikh, I do not see how I can extort my part of these fried onions.' The shaikh replied: 'A poor feeble old woman spins with much toil and trouble a little thread. She sells it for a little silver, O king, and then buys some fat, onions and firewood. Onions, fat, wood and everything—thy agents know about it all. Thou taxest the vegetables in the market—wood too, and fat. How shouldst thou not know about it? Thou chargest a pasturage tax on every goat. Better to be a beggar than such a king. The king of the whole wide world gets his money as alms from an old woman's fried onions.' Sanjar's heart bled with confusion; he shed tears of blood and went out.

'Abbasa, 'Attar's teacher, could not even bring himself to speak to Sanjar:

One day Sanjar, that noble king, came upon 'Abbasa in a secluded spot. They could make nothing of each other; and when the king had sat with him for a while he arose and departed. Someone said to 'Abbasa: 'Why wast thou silent and didst neither speak nor listen?' 'Abbasa answered: 'When my gaze fell upon the king, I saw a whole world of tough branches before me and in my hand a small and very blunt sickle. I could cut nothing with that sickle and I had no choice but to remain silent.'

Towards Iblis, i.e. Satan, 'Attar's attitude accords with Sufi tradition, in which the Devil is seen, not as the Arch-Enemy of man, but as an object of pity and even admiration: cursed by God, for refusing, alone amongst the angels, to bow down before Adam, he sorrows over and at the same time takes pride in his distinction from the rest of Creation; and does not despair of God's final forgiveness. 'Attar reproduces a well-known story of his conversation with Moses on Mount Sinai. Asked why he would not prostrate himself before the First Man, Iblis replied: '. . . I was rejected without reason by the Almighty. Had I been allowed to make that prostration, I should have been, like thee, a familiar of God. But since God so willed it—how can I say otherwise?—it was not to be.' Moses asks him whether he ever thinks of God, and he replies: 'How should I forget His kindness for a single moment? For the more He hates me the more love there is in my breast for Him.' And 'Attar comments:

Though by the curse he is banished far away from the Court, yet, in the words of Moses, he is in God's presence. Although He that had inflamed his heart cursed him, by that curse his ardour was further increased.

Elsewhere 'Attar causes the celebrated mystic Shiblī (d. 846) to encounter Iblis amongst the pilgrims at 'Arafa and, expressing surprise at his presence there, to ask whether he has 'still some hope in God'. And Satan answers:

. . . For a hundred thousand years, for a whole eternity, I have worshipped God between fear and hope. I guided the angels to His presence; I pointed out His threshold to those that had lost their way. My heart was filled with reverence for Him, and I acknowledged His oneness. And yet despite all this He drove me without any reason out of His court. And none of

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...et bazaar in Isfahan, a former capital of Iran. Isfahan's main bazaar is, like most important ones, under cover for coolness, ...g, wide corridors lined with stalls similar to those used by the sellers, including the apothecaries. The bazaar above is on the steps of the Friday Mosque, parts of which date back to the eleventh century. (Photo, Camera Press).

...ple of His court dared to say "Why didst Thou ...t him so?' If then he should now take me back ...out any reason, it would not be surprising. None ... explain this mystery. As I was rejected by Him ...out a reason; so I may be called back by Him ...out a reason. For there is no 'how' or 'why' in the ...s of God, therefore it is wrong to abandon hope ...im. As His wrath commanded my rejection, it will ... be strange if His grace may call me back again.

...ll the great poets 'Attar has composed his *Exegi* ...entum:

...e sun will be dimmed on Judgement Day, but this ...ry shall shine for ever, to be sung every day in ...dise to the tune of love by heart-delighting houris. ...e all of my poetry is a pure declaration of God's ..., why shouldst thou not chant it in Paradise? I ... opened the door of God's treasury and have called ... work Ilahi-nama. The saints that live in the seven ...ens shall read the Ilahi-nama of 'Attar.

...worth as a poet was for long obscured by the ...umber of apocryphal works attributed to him, the ...sness of which has been established only in com...ely recent times. Hence it was that E. G. Browne ...write that 'Attar 'would be much more known and read if he had written very much less' and Edgar Blochet could speak of 'a deplorable facility that led to mediocrity'.

Now that we can concentrate our attention on his genuine works it is possible at last to do justice to 'Attar's poetical achievement. The great German scholar Hellmut Ritter (1892-1971) published in 1955 a monograph on the poet entitled *Das Meer der Seele* ('The Sea of the Soul') in reference to the *dénouement* of the *Musibat-nama.* His work, which is in effect a manual of Persian and Muslim mysticism in general, is based upon a detailed analysis of 'Attar's four religious *Mathnavis*, which, in Ritter's words, 'are to be reckoned amongst the fairest flowers of Persian poetry'.

The author is Head of the Department of Persian Studies at the University of Manchester.

Note: The translations reprinted in this article are by courtesy of The Manchester University Press.

* See *Hemisphere*, July 1976.

The illustrations taken from miniatures to this text are all from 'Attar's Mantiq al-Tair *or 'Speech of the Birds', a book of poems completed in 1178. They are reproduced by courtesy of the Department of Oriental Manuscripts and Printed Books of the British Library.*

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LIQUID COAL

Geoffrey Hutton

MANKIND has lived from century to century by the skin of its teeth, as Thornton Wilder demonstrated in his well-known play. Some sort of disaster lies just around the corner from the Black Death to a world war. Can it be averted in time? Today the question is: Can we find alternative sources of energy to replace our dependence on oil to make late-twentieth-century industrial society work?

The question has been asked for a long time by people of foresight but it did not become a public—and therefore a political—issue until 1973 when the oil exporting nations (OPEC) first realised the economic muscle they possessed because of the dependence of the developed world on their products.

Britain had moved quickly into the field of nuclear fission in the wake of the second world war, when the dangers of radio-active waste were not widely understood. Harnessing the power of the A-bomb for peaceful purposes was a fashionable phrase. Then came harnessing the vastly greater power offered by harnessing the power of the H-bomb. Not splitting the atom but fusing atoms of hydrogen together and controlling the output of energy to power machines without consuming the earth's mineral resources.

In 1958 I remember visiting Britain's experimental station at Harwell and seeing experiments in accelerating particles to produce the magical fusion. On a board at the establishment there was a chart showing how fossil fuels were running down and predicting their extinction by about the end of the century.

That was twenty years ago, and the optimism of the time has been replaced by the realisation that any universal panacea for the energy problem is still years away, while the demand for oil fuels continues to increase. The appetite of the Western World grows with eating but the larder is not inexhaustible.

Three possible sources of power which are virtually inexhaustible remain: nuclear fusion using sea water and returning nearly all of it; solar energy when we have learned to collect it in space and beam it to the earth, and the fast-breeding nuclear reactor which creates its own fuel. The first two are probably a generation away. The third is acceptable only as a stop-gap because of the build-up of radio-active waste which will take almost geological periods to become harmless. What are the stop-gaps?

Solar energy gathered on the earth's surface can help, so can more advanced technology in the use of electricity. Further finds of crude oil will certainly be made as its price rises, but this is a short-term solution. In countries like the USA, the Soviet Union, China and Australia the most abundant mineral fuel is still coal, which powered the steam revolution of the nineteenth century.

There is nothing new about the idea of converting coal to liquid hydro-carbons. Germany developed processes in the 1930s and used the products to power its war machine. South Africa, facing the possible threat of an oil embargo, constructed a plant in 1955.

Broadly speaking, there are three main processes, of which the Fischer Tropsch synthesis has been proved commercially, but recovers only 30 per cent of the oil. Experimental work is being carried out on the other two —pyrolysis and hydrogenation, which promise double the return.

Work on these is being carried out in several countries, with the emphasis on hydrogenation, breaking up coal into a slurry with oil, pumping in hydrogen under pressure and heating. Work on different hydrogenation processes is being done in the USA, in Japan, in South Africa, and since 1974 in Australia when Broken Hill Pty. Ltd. initiated a research program to test the qualities of local coals and adapt existing processes to local demands.

The solvent method of hydrogenation is labelled Solvent Refined Coal (or SRC) which produces a glassy solid at normal temperatures and melts at 150° Celsius. This can be used as a clean boiler fuel to replace either fuel oil or raw coal, which causes pollution. The Japanese see it as an additive to coking coals. It may also be a step towards providing for our transport fuel needs.

Direct and indirect hydrogenation both require catalysts to break up the chemical components of the coal, producing oils for different uses. The range is wide.

Most of the experimental work is being carried out on a pilot scale and nobody is making boasts of a great breakthrough. If — or more likely, when — the most efficient system is evolved, there will still be immense problems to solve. Mr Norm Keith, writing in the BHP Journal, thinks it unliikely that a commercial hydrogenation plant will be in existence anywhere in the world before the mid-1980s. It may well be that the simpler processes will come into operation first, and the more sophisticated later.

Mr Keith predicts that ultimately, using a low-ash coal near a major industrial centre with an adequate water supply, it may be possible to produce coal liquids for $15 to $18 a barrel in 1977 values, compared with the current import price — which is certain to rise.

But it is not time to start cheering yet. The conditions may be hard to realise, and before the process could begin vast expenditure of capital would be needed. Placing the optimum size of a plant at a hundred thousand barrels a day, it would need six to supply even Australia's current demands. Six plants at over a thousand million

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...rs each, with their ancillary coal mines, water supply ...nfrastructure could double the price. One estimate ...me was that it could rise to four thousand million, ...ng the grand total more than twenty thousand million ...rrent prices.

...is would be an immense capital outlay to service, ...ther by government or by private interests. It would ...highly automated and capital-intensive, increasing ...employment problems in the manufacturing and ser... industries. The problems are for greater than merely ...king out a technical solution to a technical problem.

...me experts question whether the use of Australia's ...k coal reserves — great as they are — is justified, in ...light of the enormous capital cost involved and the ...te of power in extracting hydrocarbons from the ...ds. Hard coal is valuable enough to be exportable — ...icularly to Japan. In Victoria there are vast reserves ...nferior brown coal, whole geological eras short of ...oming black coal. It is two-thirds water and not ...able enough to be used for export. After drying it is ...d to fire the power stations of the Latrobe Valley, ...t is baked into briquettes for commercial or domestic ... Feasibility studies are being made to determine ...ther its oil can be recovered at reasonable cost. ...y have a long way to go, but the idea is attractive.

...eeding from hand to mouth, how far does one, or ...ld one, look ahead? The question is now being asked ...e highest scientific levels and put to economists and ...sters. Australia is rich in high-grade coal. Possibly ...es enough to last for two or three hundred years ...ss demand continues to escalate at its present ...ming rate. Maybe it has even more.

...t it is a highly valuable natural resource and con...g it to oil fuel is, at the best, a wasteful process. ...Strait oil is now providing for two-thirds of our ..., but unless large new beds are discovered soon, ...uction will level off and some time in the 1980s we ...e importing some two-thirds of what we require.

...spite of the OPEC group's success in forcing up the ... of crude oil to the buyer nations, there is now a ... of oil in the world, and without tough, concerted ... by the producers, the price might have remained ...drock. Saudi Arabia, which has the greatest proven ...es, has been the moderating agent, holding the ... of under-cutting its fellow members if their demands ...ed excessive.

...glut is not likely to continue for long. The world's ...st, led by the USA but now including the Third ..., is increasing and President Carter's attempts to ...e consumption met a hostile reaction from Congress ...e people. Estimates of the world's breathing space ... reserves run out are now down to thirty — at the ...nty — years unless demand is reduced or there are ...ant new discoveries.

...g before then the oil-buying nations are likely to ...e pinch: one estimate is about 1985, when Aus... supplies will be under pressure. Research in the USA suggests that by the mid-1980s, only about seven years hence, demand is likely to outstrip supply, and as oil-well after oil-well dries up, feeding the world's growing thirst for mobility, the remaining billionaires will be in a position to dictate their own terms.

Saudi Arabia, in particular, will have reserves left but it is not rushing to make the heavy capital investment needed to drain itself dry. It can keep on selling on its own terms, and the rest of the world will have to agree to them — unless the others evolve some alternative sources of energy at economic rates.

In the current state of scientific achievement it seems reasonably certain, that, given the green light by the politicians, new means of energy-production can be put into practice within the next few years. If the cost is too high to be an economic proposition, the work must be done with governmental co-operation, by some sort of consortium of the State and private enterprise.

When the late President Kennedy announced in a moment of euphoria that the USA would put a man on the moon, and bring him back alive within ten years, he was thought to be talking big. But the backing was provided, the scientists and aeronauts recruited, and the job was done. How much more important it is today to provide alternative sources of energy to power the world's industries and transport instead of relying on its dwindling resources of fossil fuels.

In the visible future it seems probable that oil fuel will be largely replaced by coal for producing electricity in power stations. A massive, government-backed program to produce power by nuclear fusion — probably in the USA — may reach the break-through point by increasing the strength of the lasers used to produce temperatures of one hundred million degrees Celsius, or by other means, but it will not be for tomorrow on a commercial scale.

In the meantime we are left with what are, at the best, stop-gaps. There is nuclear power, there is the hydrogenation of coal, the step-by-step increase in the use of solar energy, and — as President Carter proposed — restraint in the use of the world's stocks of fossil fuels. If we care about the environment we live in, the last should not be ignored.

Mankind survived for centuries ...th the power derived from wind and rivers, the horse a... the bullock, and in the process he evolved a high level ... civilisation. It may be too late to turn back but it is high time to make large decisions before the future overtakes us and we find our accelerating machine at a sudden halt. The silence would be deafening.

Geoffrey Hutton is a well-known Melbourne journalist.

Articles previously published in this occasional series on the search for alternative sources of energy are: *Geothermal power*, January 1975; *Laser fusion*, April 1975; *Solar energy*, September 1975; *Solar energy*, December 1976; *Obtaining energy from the fusion method*, July 1977; *Wind power*, March 1978; *Laser fusion*, June 1978; *The steam car*, December 1978.

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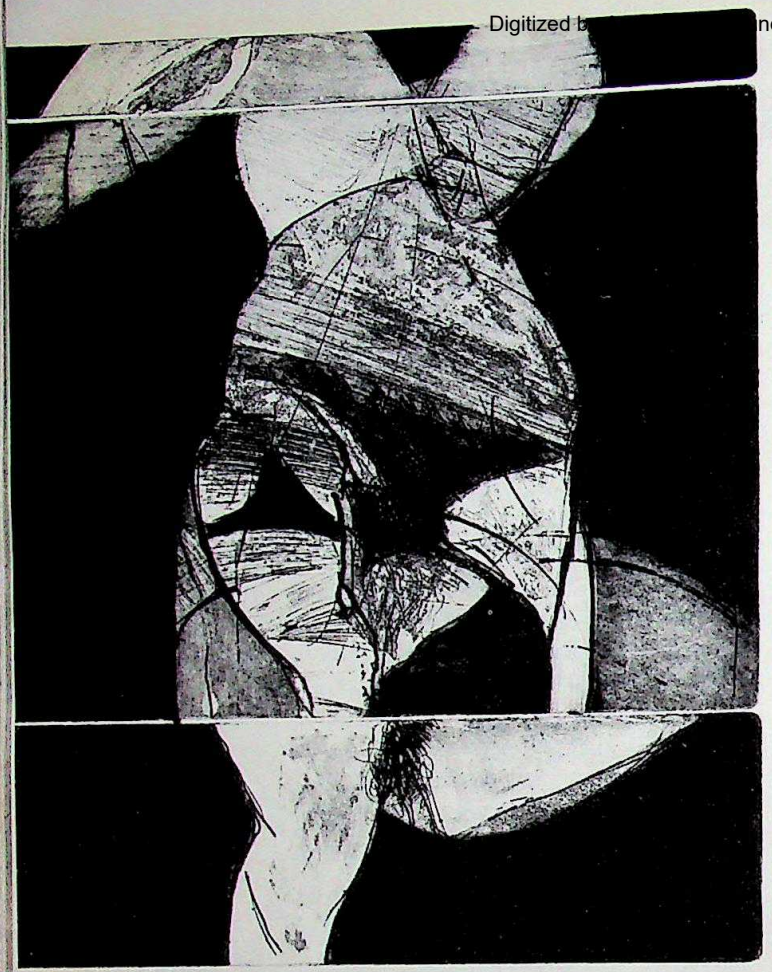

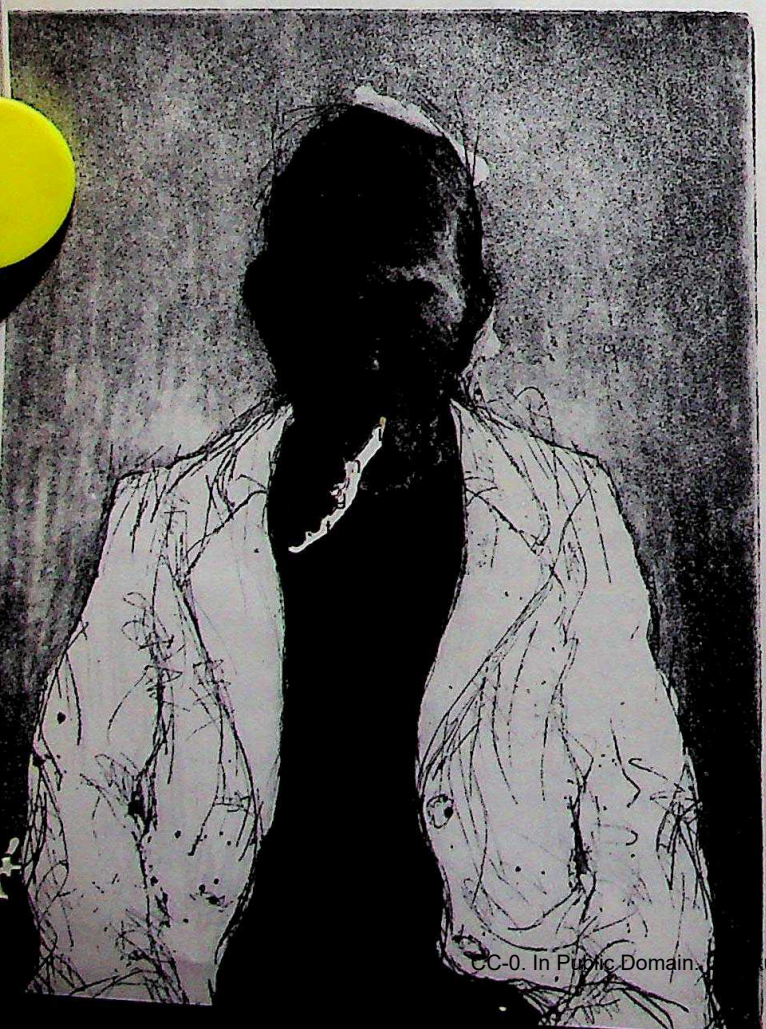

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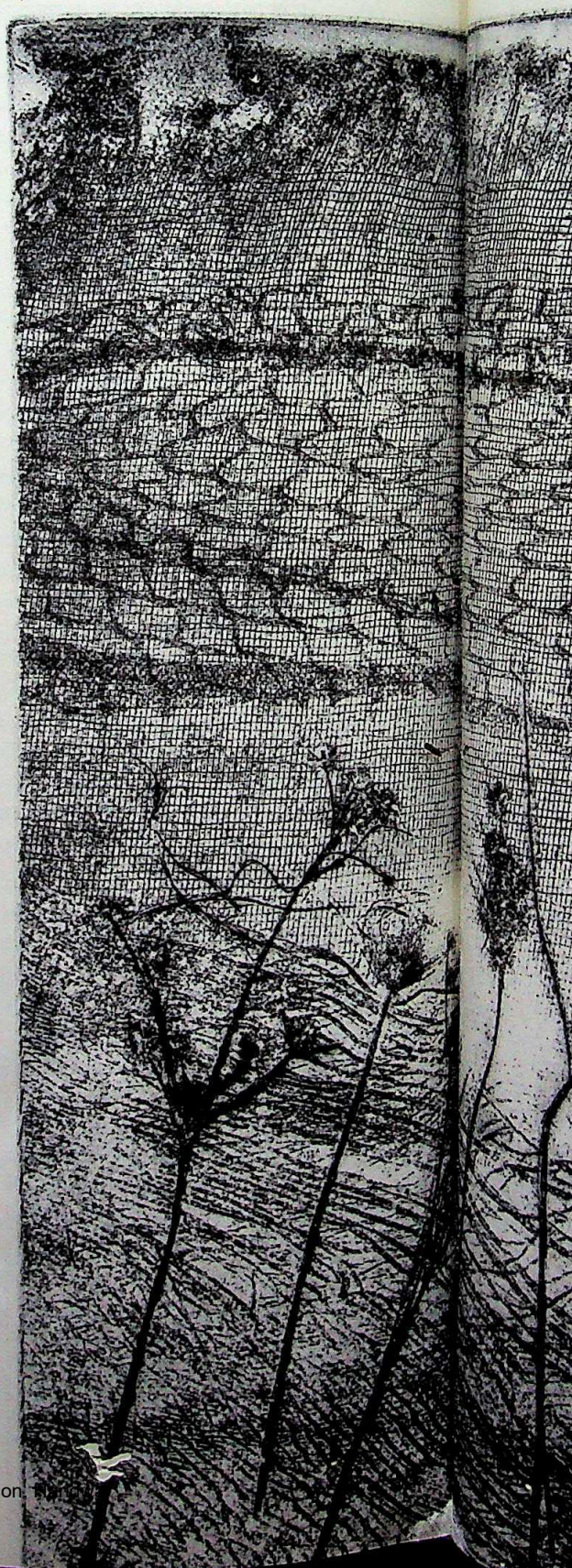

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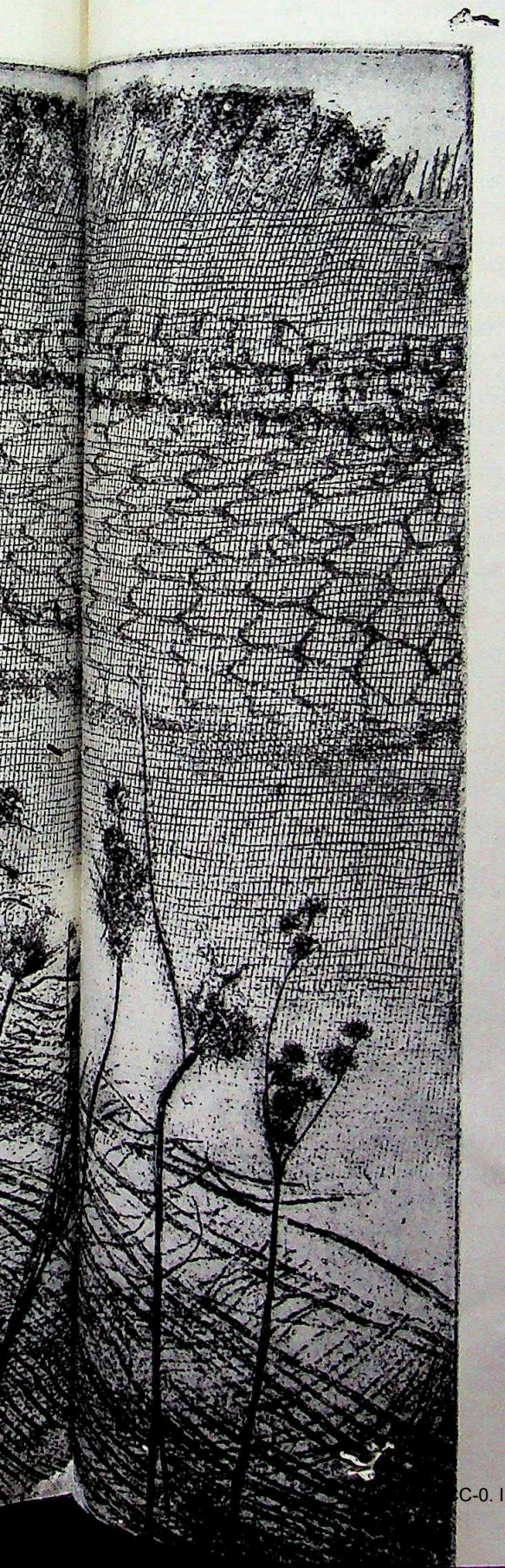

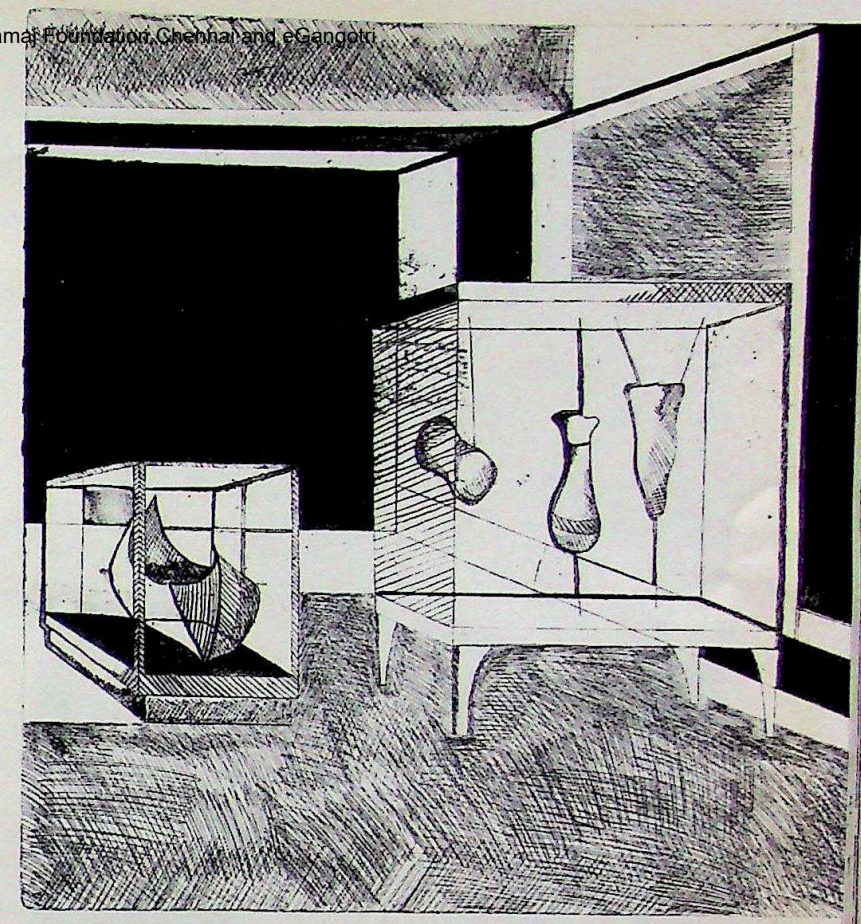

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Four of the printmakers on the preceding pages are graduates of the Royal Melbourne Institute of Technology. Anti-clockwise, the untitled works are by Tina Smynios, Frank Woodard, John Lewis (degrees in Fine Art/Printmaking) and Peta Costello (Fine Art/Painting). The work in the centre is by Susan Rushforth, whose Diploma for Painting is from Sydney, and who is now teaching art herself.

Above is a work by George Gittoes, an artist in several media: he paints (and, obviously, can make a fine print) and was recently responsible for the décor of *Poppy*, a dance drama about the French writer Jean Cocteau. But George Gittoes will be better known to *Hemisphere* readers for his work in underwater photography and holograms. (*Hemisphere*, October 1976.) — Editor.

'DARE THE CLOUDS OF HEAVEN'

DAVID LEWIS has once again produced a book on Pacific navigation that the earthbound can scarcely put down. In *The Voyaging Stars* (Collins, ISBN 0 00 216404 3) he has collected the material he and his son Barry put together on voyages in David Lewis' own boat *Isbjorn*, travelling hundreds of miles across the ocean without aid of compass or chart or anything other than the local navigators' centuries-old knowledge that had been passed on from father to son; in other cases, David Lewis went out with the navigators in their own craft, which he describes with admiration and the thorough knowledge of the born seaman.

Admittedly, David Lewis started off with advantages few of us could have shared: he grew up on the island of Raratonga, where he went to a local school, barefoot, and learnt to know the local youngsters and know their minds. He speaks with admiration of the boundless knowledge of the sea-going peoples of the Pacific, warm-hearted and generous with their knowledge of the stars, the currents and the movements of birds.

The book is full of the information that was gathered by a modest, well-informed and gentle listener about styles of boat-building, not only in the Pacific, but in the Indian Ocean and in the Mediterranean-Atlantic areas; there are comparisons and contrasts.

But even more fascinating than the details about hulls and sails and rigs are the human and very alive anecdotes about the very genuine and welcoming hosts throughout the islands, and the recounting of their knowledge.

The knowledge is not only of the stars and their movements, and what their positions portend in the way of weather, but of the differences in light in the sky over sea as against that over land; there is information about the shooting lights that come from the direction of land many miles out at sea, that disappear as the boat approaches land. One of the navigators was even able to tell the difference between the shafts of light from two volcanoes — an observation later proved by the author of *The Voyaging Stars*, who needed little convincing of the authenticity of his hosts' knowledge. Like the Bugis of Indonesia, the Islanders can tell the temperature of the water by feel, and that temperature can tell them in which current their boat is sailing (Fiji or Tonga water?). But then there is more: the surface cross-swells that indicate distances from land.

David Lewis has written for *Hemisphere* on a number of occasions (October 1969, August 1972, May and August 1977, August 1978) and, in fact, parts of this book were published, by agreement with Collins, the publishers, in *Hemisphere*, May 1977.

We may well look forward to David Lewis' coming discoveries among some other master-mariners of the region: the Bugis, with whom he plans to sail later this year.

—PETER GILMORE

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WAVES

Dancing
a graceful swan-like
tumultuous
waving
bidding
'come
I'll help drown
your sorrows!'
When love has gone
I come by your side
and the wind whispers
its tunes through my hair
life is time passing by
there's no end even if you cry
so do not despair
there's serenity
in the seas.
Now I kneel by your open doors
sand between my toes
trying to reach my love
yet still full of pain.
Waving
bidding
to take me by my hand
to an endless
stark land.
O wind, dear wind
sing my love songs
and my pleas
through the empty seas!

—ABDUL LATIF ALI

THE VILIFICATION OF CAPTAIN BLIGH
Sydney, January 1808

'Their price of course is everything, an eye
at the keyhole, taxes to underwrite your prayers,
and the cat to teach you husbandry.
Where is the Serpent, if not everywhere,
its tail knotted in each our bellies, and they
alone with rapiers! Well! Bowled over,
one Calvinist sailor, one bogeyman still
bellowing like a walrus—grant him foul weather
with daughters! Signatures by the thousand tell
who's with us. Would I lie to you? Uncork brother,
Parramatta to the water's high
on rum, cabinets rifled, diaries read,
and here's a rumour—this Master William Bligh
was found beneath the bed! He was under the bed!'

—ALAN GOULD

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A VIEW OF RACE

Colin P. Groves

'FOR US,' said a former President of Argentina, Juan Perón, 'race is not a biological concept; it is something spiritual. It constitutes the sum of the imponderables that make us what we are, and impel us to be what we should be, through our origins and through our destiny. It is that which dissuades us from falling into the imitation of other communities whose natures are foreign to us. For us, race constitutes our personal seal, indefinable and irrefutable'.

And that, in a nutshell, is what 'race' boils down to. Indefinable; and because of that, irrefutable. If people feel there is such a thing as race, they will not be persuaded out of it, because it has no reality and there is nothing to use as a basis for argument. A gut feeling.

If people care to construct their lives around gut feelings, that is up to them; but they should be well aware of the consequences. And the consequences in history have been horrendous: the enslavement of untold millions, the elimination of millions more. Literature is pervaded by race assumptions ('You interest me very much, Mr. Holmes', says a character in *The Hound of the Baskervilles:* 'I had hardly expected so dolichocephalic a skull or such well-marked supraorbital development'); history is bedevilled with tacit race/personality equations ('Charlemagne had the Germans' natural taste for music', wrote Chateaubriand in 1833); even archaeology has been coloured with interpretations on the basis of race ('The history of Africa south of the Sahara is no more', writes the influential anthropologist Seligman in 1925, 'than the story of the penetration through the ages, in different degrees and at different times, of the Negro and Bushman aboriginals by Hamitic blood and culture'). People loosely talk of hot-blooded Mediterraneans, Teutonic thoroughness — implying not only that most (all?) of the respective populations have those characteristics, but that those personalities are somehow in their genes, 'blood will out', racial characteristics will dominate.

Of course, such notions have been held since time immemorial. Even Linnaeus, the originator of the modern system of biological classification, characterised his races of *Homo sapiens* by temperament as much as by appearances: people of the American race (American Indians, that is) were 'Red, choleric, upright; governed by custom', the Europeans 'white, sanguine, muscular; governed by laws'; the Asians 'yellow, melancholic, rigid; governed by opinion'; the Africans 'black, phlegmatic, relaxed; governed by caprice'. One feels that these descriptions bear no pejorative connotations; but the physique/personality association is insidious.

But a short step from Linnaeus's innocent characterisations led to the master-race ideology. It is likely that the institution of slavery helped to promote this; be it noted, however, that the slavers themselves were guilty of 'the unacceptable face of capitalism' — to put it mildly! — rather than of racism as such: they dealt on equal terms with the African rulers who sold them the slaves, and in the 1790s the second highest paid man in the Cape Coast colony, the chaplain, was a Negro — Philip Quaque. I tend to think that the European rivalries had as much to do with the growth of master-race theories; they were, perhaps, the catalyst which acted upon the matrix provided by the institution of slavery.

It was Count Gobineau, writing in the 1850s his four-volume *Essai sur l'inégalité des races humaines,* who crystallised the unspoken racial superiority notions of many Europeans — northern Europeans in particular. The Europocentric attitude of nineteenth century science had led to a sixfold classification of human races, with Negro, Mongolian and Australian (or Malay!) races outside Europe, and Nordic, Alpine and Mediterranean races within Europe, the last of these extending eastward through the Middle East into India. The tall, robust, blond Nordics were considered every bit as different from the stocky, sallow round-headed Alpines and slight, dark Mediterraneans as from Negroes or East Asians. It was Gobineau's special contribution that he pointed the finger at just one of these races, the Nordic, and held it responsible for all advances in civilisation, and for every benefit that humanity had thus far experienced.

Where the Nordic masters went, they could not help themselves: they simply had to found a high civilisation. Where they survived, pure-blooded, so did their civilisation, but 'wherever Nordics have allowed their blood to become diluted, civilisation has decayed'. The Chinese civilisation was, of course, founded by Nordic conquerors; foolishly, they allowed themselves the indulgence of fraternising with the natives and so the civilisation stagnated: and that of course, is why today no trace of Nordics remains there!

If we examine this ludicrous theory, and trace it back to its basic assumptions, we can see its dependence on one unexamined assumption: that there is such a race as the Nordic. Of course, we can all identify a 'Nordic type': tall, ruggedly built, blond, long-headed (dolicho-

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...alic, as in Sherlock Holmes), tending to be hairy, and ...on. But if such a type is to be classed as a race, ...must find where it came from: where, at one time ...t today, there were *only Nordics,* just as at one ...in Australia there were only Aborigines.

...ere is no such place. In Sweden, the most likely ...e for such a race, about 30 per cent of people are ...dic' — they are nowhere even in a majority. More ...monly, North Europeans have blond hair but are ..., or have brown eyes rather than blue, or fair blue ...s but black hair. And there is not a scrap of evidence ...the situation was ever any different. As far as one ...s back through the evidence of prehistoric grave-...s, we get no nearer to a localised population of pure ...dics. We are driven to the conclusion that it is simply ...atter of gradients of characters: broadly speaking, ...further north one goes in Europe, the commoner do ...ain features — tall stature, blond hair — become; and ...t we call 'Nordic' is a random combination of these ...res in a single person.

...e same is true of the other European 'races: In the ...ntains of central Europe, there are high frequencies ...ound heads, sallow skins and so on — but nowhere ...ere a 'pure' Alpine. Even among those populations ...ed as 'Mediterranean' that are farthest from Europe ...Pakistan; the Atlas Mountains) we can find blond ...e; here and there — and not rarely in many places ...e can find round-headed people; and some are as ...s any Swede. Racial characters are neither clear-...or homogeneous: to use the jargon, they are clinal ...ging in geographic gradients, not sharply) and non-...rdant (varying independently, not together).

...s finding did not stop the anthropologists of the day ...erecting their racial typologies. If clear-cut races ...ot exist now, the assumption went, they surely did ...the past, and one of the tasks of the profession ...o analyse populations into their original components: ...d out which 'pure races' had mixed in what pro-...ns to produce the 'unsatisfactory' populations we ...day. This of course amounted to saying that even ...es do not exist they ought to. And so, especially ...rope, races were conjured up out of the air to ...h various polar types: the Dinaric race, predomina-...southeast Europe and western Asia, was supposed ...ve contributed the extremely short, broad heads ...n in that region — a shape which was later found ...e its existence to the prevalence of swaddling ... — while the East Baltic race had added blondism ...ples who otherwise resembled Alpines. And so ...on. Carleton Coon, as late as 1939, analysed the ...es as 'an ancient and subsequently specialised ... of Mediterraneans and Atlanto-Mediterraneans ...artially blond Dinarics'.

...s the use made of this type of approach by Nazi ...ologists that finally brought the whole thing into ...te. Viewing the German people first as Nordics, ...when this became untenable ('Nordics' make up 0.7 per cent of the population in Bavaria, 6.7 per cent in the north of Germany!), as 'Aryans', a term derived from linguistics and modified in the direction of mysticism, to describe a hypothetical master race which did not have to have those inconvenient Nordic characteristics but only a pure-white soul, the 'race experts' followed the conquering armies around Europe, picking out those tainted with Jewish, Gypsy or Slavic ancestry and consigning them to the roles preordained for them by the master race. The sequels are well known, and there is bitter irony in them. Arthur Koestler, in a well-argued book *The Thirteenth Tribe,* has made the case that the vast majority of European Jews owe little or nothing to a Middle Eastern ancestry, but derive from the mediaeval Kazar state of the north Caucasus region; while the Gypsies, who were gassed along with Jews in uncounted tens of thousands, speak one of the closest languages to the original Aryan stock!

The destruction of the Third Reich should have, one would have hoped, demolished the racial theories which were its very basis. Certainly, the silliest aspects were destroyed: no more pure races were constructed out of fevered minds, and for the first time the inherent variability of a population was acknowledged and studied for its own sake. But the deeply ingrained racial feelings were still there: in victors as well as vanquished. When, as happened in South Africa, a people who had fought against Nazism proceed to elect a government led by people who throughout the struggle had promoted the Nazi viewpoint (and some of them had even been imprisoned for it), one wonders whether the message had got home.

Are there, then, no races? Most people have some idea that there are at least major categories: Caucasoids (white), Negroids (black), Mongoloids (yellow) are the most widely believed in, with the people of India being Caucasoid though dark, and the Australian Aborigines belonging perhaps to a fourth category, Australoid. But even these gross divisions meet with the same objections of clinal variation and non-concordance.

Consider the vast tracts of Soviet Central Asia: an area larger than western Europe. In the southwest live Iranians and Tadzhiks, who by anyone's reckoning look Caucasoid, with narrow faces, prominent noses, and wavy hair; they are tall, the men averaging about a hundred and sixty-eight centimetres; but among the Tadzhiks, there is a low incidence of the epicanthic fold, the 'slit-eye' condition we think of as typical for Mongoloids. In the northeast of the region live the Mongols and Buriats, with flat broad faces, small noses ,and straight black hair; men average only a hundred and sixty centimetres high; and 90 per cent have an epicanthic fold. They are the typical Mongoloid: indeed it is among them, rather than the Chinese or Japanese, that one finds the most extreme Oriental looks.

Between the stereotypical Caucasoids and Mongoloids are a number of nations and tribes: Uzbek, Kazakh,

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Kirghiz, Telenget. The average face shape, head shape, nose type, hair form, skin colour, stature, and epicanthic fold frequency change across the region, gradually going from one extreme type to the other, not necessarily in a smooth gradient — the Kirghiz, for example, are rather shorter in stature than one would predict from their geographical position—but each showing a range of variation about the mean so that among some peoples, notably the Kazakh, we can see almost the whole gamut from Caucasoid to Mongoloid.

Archaeology shows that originally the cline was shifted further east; skeletons from Kazakhstan become less frankly Caucasoid, more Mongoloid, over time. There has been argument over this: did the invasions of Attila, Genghis Khan and Tamurlaine introduce Mongoloid genes into originally Caucasoid populations? Probably not, the modern conclusion suggests: the change began well before any historic record of Mongol invasions, and has continued to the present. We are probably witnessing an evolutionary change on the spot. And indeed, when we consider that these invasions were of a highly organised but sparse population, which could sweep all before it militarily but dominate, not replace, the indigenous peoples, what genetic effect could such migrations have?

We find exactly the same kind of situation in island South-East Asia. There is a vast difference in the appearance and physique of most Chinese and most Papuans: the former broad-headed, with broad flat face, pale yellowish skin, straight hair and Mongoloid fold (epicanthic fold); the latter narrow-headed with long narrow face, dark brown skin, prominent broad nose, frizzy hair and never an epicanthic fold. But follow the cline through Thailand, Sumatra, Java, the Nusantenggara chain and Timor: gradually the people become less 'Chinese', more 'Papuan'. Already in Sumatra the Minankabau are darker than the Chinese, under half have straight hair, and only 14 per cent have the epicanthic fold. Javanese average darker still, and none has completely straight hair; the Anggerai people of West Flores have narrower heads and broader noses, and 60 per cent have frizzy hair; people of East Flores are still darker and broader nosed; while inland Timorese are as dark as many Papuans and 80 per cent have frizzy hair. The picture is somewhat confused because sea-going Malays have established themselves in the coastal regions of most islands; but the inlanders, the indigenes, show an ideal cline. As the Papuans and Australian Aborigines are clearly closely related, and differ on average rather than absolutely (less frizzy hair in Australians, for example), we have essentially passed from 'Mongoloid' to 'Australoid' by a neat, gradual cline, just as we passed from 'Mongoloid' to 'Caucasoid' in Central Asia.

Race, then, is really an attempt to pigeon-hole a situation which cannot be adequately pigeon-holed. The human mind is adept at this; it seeks out categories where there really are none, and tries to cut up a spectrum into discrete parts. Such ways of looking at the natural world often do, in fact, have heuristic or mnemonic value; but in the case of human variation I would say that the negative aspects of categorising outweigh the positive. For, once the categories have been set up, the loose-thinkers and the frankly malicious begin to ascribe to them characteristics far beyond the physical features on which they were defined: personality, criminality, intelligence, superiority.

And the results could be foreseen long ago. In his *Principles of Political Economy,* John Stuart Mill wrote: 'Of all vulgar modes of escaping from the consideration of the effect of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences'.

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MUSLIM HISTORY

Historians and Historiography during the Reign of Akbar, by Harbans Mukhia; Vikas Publishing House, New Delhi; 197 pages. ISBN 0 7069 0444 3.

THE EMPEROR AKBAR (1556-1605) was a contemporary of Elizabeth I and Phillip II. His long reign produced several notable historical works. The typical chronicle is in Persian, and the arrangement is usually strictly chronological. The story starts with Adam, or Muhammad, or the beginnings of Muslim rule in India, but most of the chroniclers spend most of their time on the reign of their patron, Akbar. As the authors, or compilers, were courtiers, most of them are by modern standards nauseatingly deferential to Akbar's grandeur.

Dr Mukhia's book tells us much about the chroniclers and their conceptions of history and historical causation. He is rightly critical of the way most modern historians of Mughal India have been seduced by the nature of the chroniclers into writing court-centred histories which often, like the chroniclers, are simply tedious descriptions of battles and the heroics of Akbar. Following E. H. Carr's dictum, 'Before you study history first study the historian', he tries to place the chroniclers in their time and place, and thus describe the preconceptions and influences which shaped their minds, and so their histories. This book is intelligent and innovative. Indeed, and this is high praise, it stands comparison with a recent excellent parallel study by S. A. A. Rizvi, *Religious and Intellectual History of the Muslims in Akbar's Reign.*

—M. N. PEARSON*

* *Dr Pearson is a Senior Lecturer in the School of History at the University of New South Wales.*

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THE JAPANESE

Japanese, by Edwin O. Reischauer; The Belknap Press of Harvard University Press, Cambridge, Massachusetts and London. ISBN 0 674 47176 8.

PROFESSOR Reischauer of Harvard has long been recognised as a leading interpreter of Japan to the West and of the West to Japan. Born and raised (through adolescence) in Japan, he has lived there for many years. He has also served as the American Ambassador to Japan from 1961 to 1966. Yet, although this background makes him exceptionally familiar with the Japanese, he has chosen to write about them with balanced objectivity. What he has to say concerning Japan therefore commands immediate attention.

The book under review, available in Australia through Australia and New Zealand Book Company, is no exception. Generously illustrated and beautifully written, it should be required reading both for people seeking a good introduction to Japan and for specialists in Japanese affairs. Reischauer's canvas is broad and includes sections on Japanese history, society, politics, and foreign relations. His brush-stroke is also bold, for the author is not afraid to delve into complex matters that often intimidate less experienced writers. The reader may not always agree with Reischauer's interpretations. But he cannot help thinking about Japan more deeply as a consequence of reading this book.

Throughout the book, Reischauer attempts to place some characteristic impressions about Japanese into perspective. For instance, while agreeing with other observers that the Japanese tend to identify with corporate groups such as family, school, and firm at the expense of individualism, Reischauer denies that this makes them conformists. On the contrary, their individualism is richly and variously expressed in their creative arts and the literary form of the 'I-novel' which have attained world recognition.

Similarly, Reischauer concedes that Japanese society is highly hierarchical, based on elaborate rankings between and within groups. At the same time, he asserts that Japanese society is as egalitarian as many Western societies in providing opportunities for upward social mobility, principally through education, which weaken class consciousness and class stratification.

In the same vein, Reischauer questions the image of the Japanese as a nation of imitators and borrowers rather than originators. Imitation and borrowing on both sides, Reischauer, genius can be found in the ways the Japanese have adapted foreign things to suit their own circumstances, both historically and in the present. The sensitivity of the Japanese is likewise apparent in their ways of organising themselves to live harmoniously in a rapidly changing industrial society.

Two topics in the section on society and social behaviour — which the reviewer found to be the most interesting part of the book — include the nature of Japanese ethics, the sources of and ways to contain violence in society, and the psychological traits of the Japanese. Of particular value here is Reischauer's discussion of why the Japanese see ethical norms in terms of situational imperatives as opposed to an orientation to universal and abstract concepts of sin and guilt. In dealing with this problem-area, the author parts the curtain of mystery that all too often obscures a balanced assessment of why the Japanese behave as they do in social relations.

Reischauer is also very conversant with Japanese politics and foreign relations. In general, he is impressed with Japan's democratic political system which he compares favourably with those of many Western democracies. Yet, he observes that the Japanese have no 'gut feeling' about democratic ideals and that the subordination of the individual to the group in Japan, which leads to an emphasis on consensual politics and an avoidance of open debate on public issues, may be inauspicious for the future of Japanese democracy, especially if pressures, principally from abroad, build to the point where the present system comes under threat as a way to get things done.

Reischauer is plainly worried over Japan's extreme dependence on access to raw materials and markets abroad and the country's vulnerability to changing patterns in international trade which influence the economy directly, often in negative ways. He warns: 'The decline or stagnation of world trade would have serious consequences for all countries . . . but for Japan it might well be fatal.' He therefore finds it imperative that Japan and her major trading partners, including Australia, must work together to solve oustanding problems in their relationships.

In Reischauer's view, this task transcends the solving of purely economic problems, although these problems dominate the headlines. Rather, he insists that good relations between Japan and other countries depend first and last on good communication. He is critical of Japan in this respect. The Japanese, he claims, have done little to break down their own sense of exclusiveness, which rests in no small part on racial self-consciousness, in relating to the wider world around them. In some ways, Reischauer finds the Japanese more internationally-minded than other peoples, particularly the Chinese. Yet, their sense of apartness has also prevented them from building bridges of understanding to other countries and cultures. They have for too long focused on developing skills to handle economic problems at the expense of contributing to the solution of their own and the world's problems in the manner one might reasonably expect of a nation with so much economic power and responsibility.

For its part, the world must do more to understand the Japanese as they really are, not in terms of false clichés and distorted images. Books such as this ought to facilitate this process. Reischauer's is an authoritative and indispensable source on the Japanese.

—STEPHEN S. LARGE

The reviewer is a Senior Lecturer in History at the University of Adelaide.

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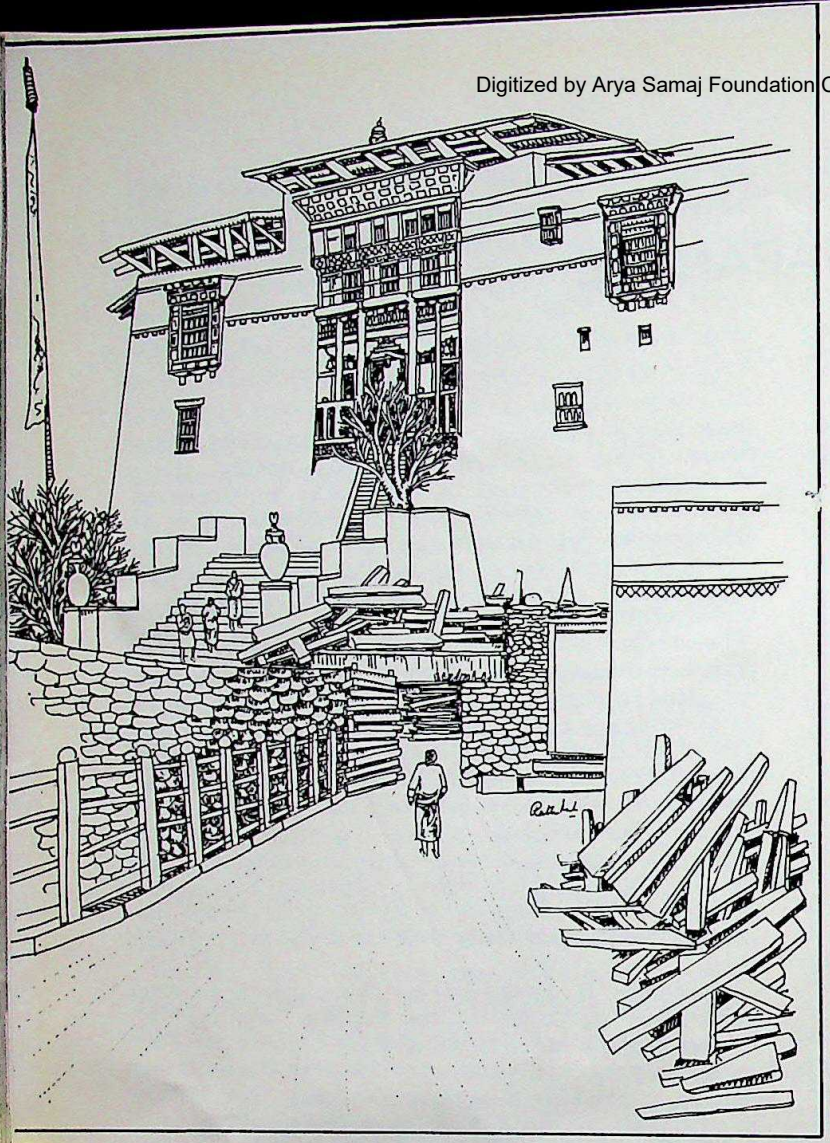
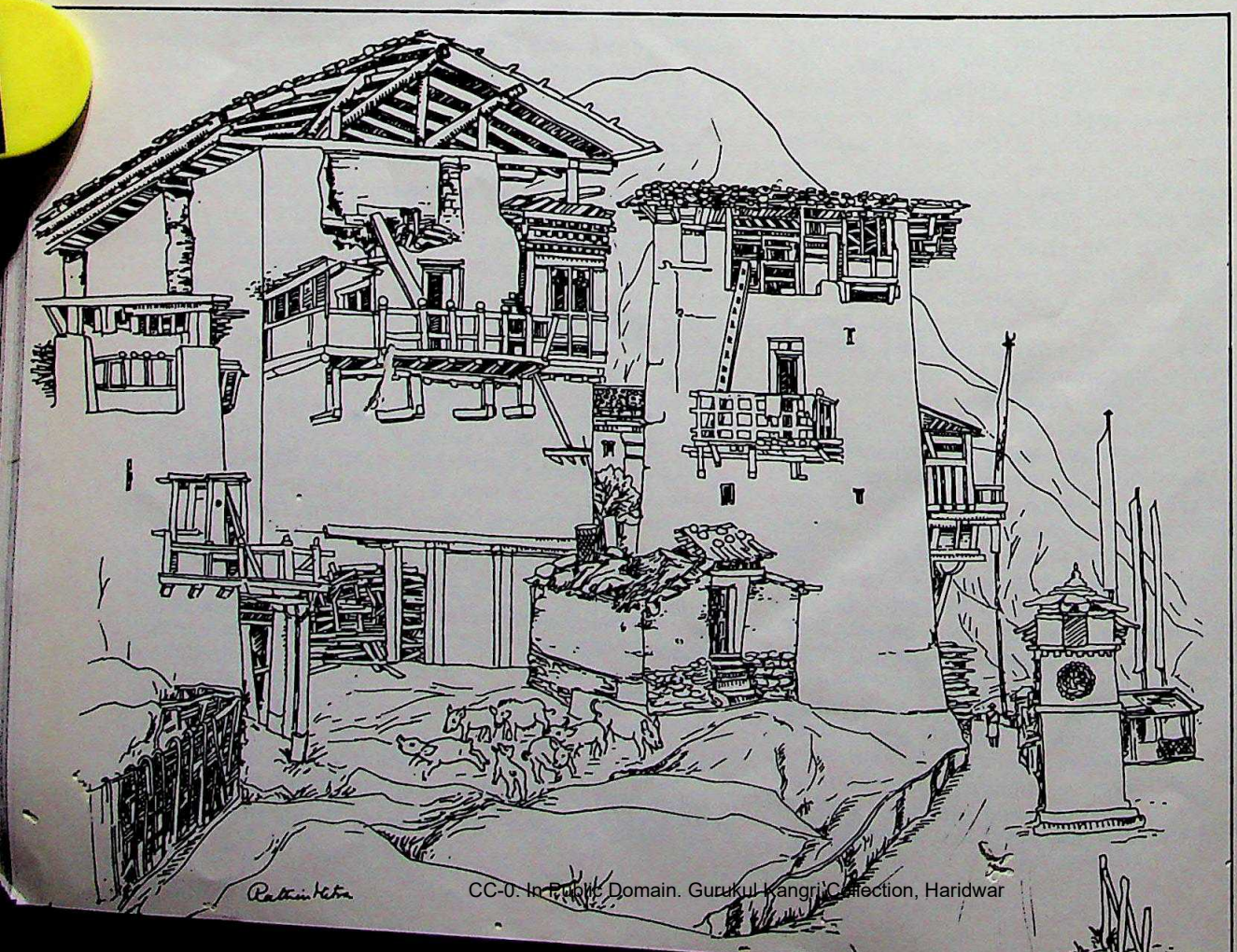
BHUTAN



Punakha Dzong, a winter palace, at the confluence of the 'Father and Mother Rivers'.

A house in Paro, in the western part of Bhutan.



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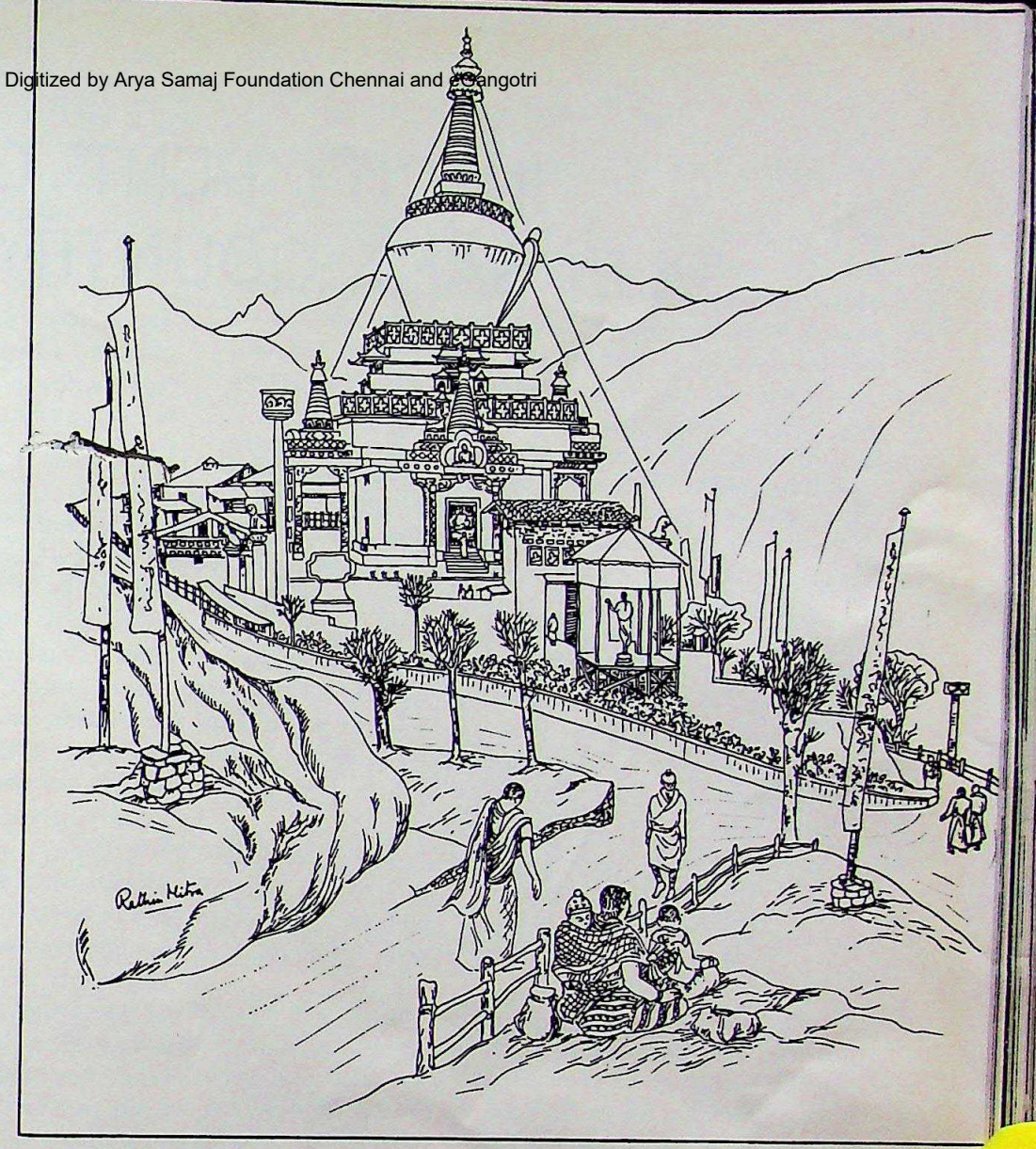
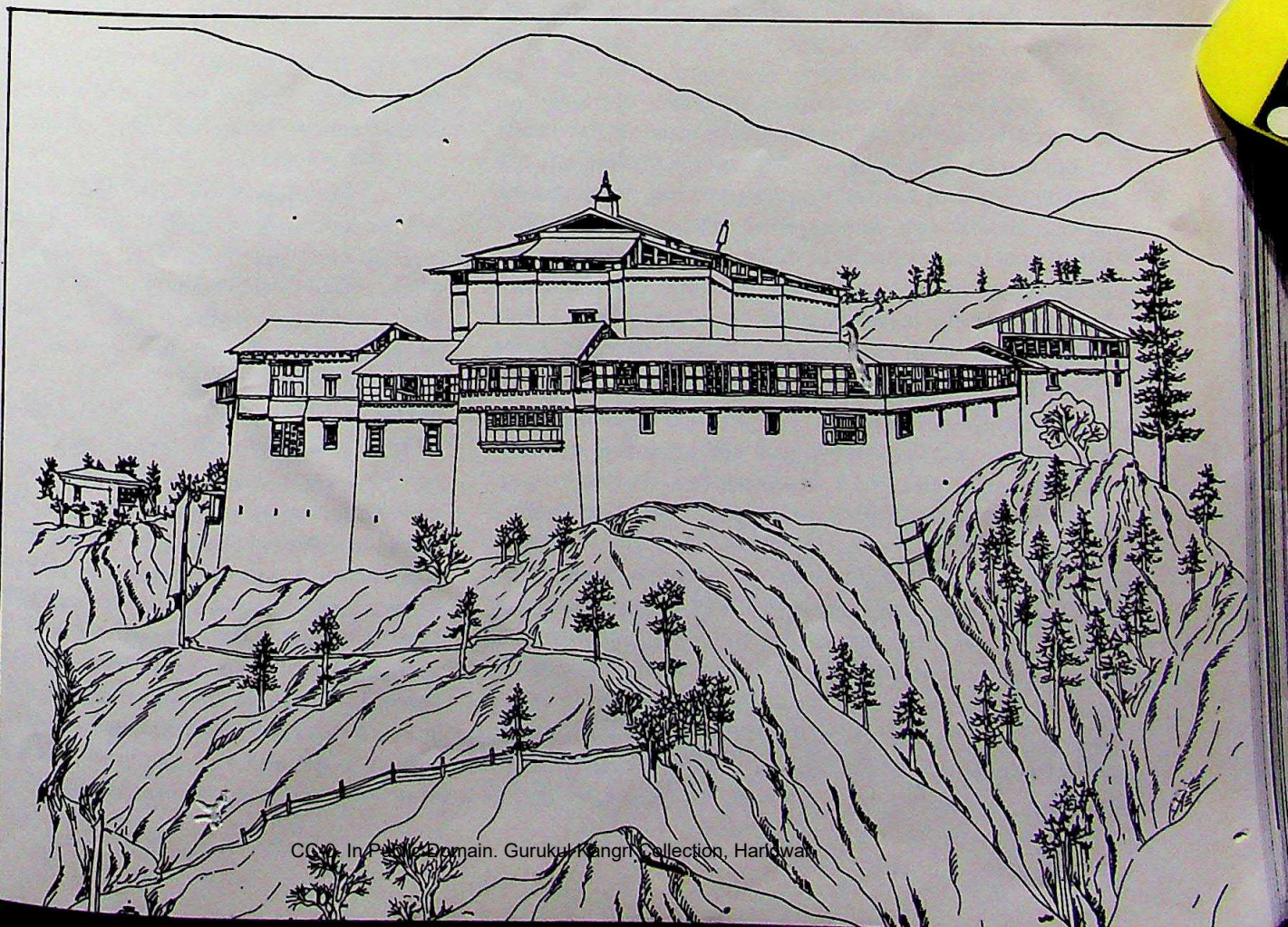


The Great Chorten, Thimphu.

Simtokha Dzong at Thimphu.



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'IN CITY PENT' OR 'PLEASANT COUNTRY EARTH'?

John Douglas Pringle

Ideas about being alone or being outnumbered depend to a large extent on the moulding of the person: in most Asian and African countries, the idea of privacy in the sense in which most Westerners think about it is quite foreign. 'Open house' in Africa and Asia has real meaning, and has little to do with the old English tradition among the wealthier classes of being 'At Home' to callers on one specified afternoon at clearly specified times.

But even Europeans, in many cases, hate the idea of aloneness: in Spain and in many of the countries of former Spanish occupation (in South America, Mexico, the Philippines) everyone 'does the Paseo' in the cool of the evening, families taking a stroll along the sea-front or along the main street, stopping and chatting when they meet neighbours and friends. In France, the pavement café has the same effect, only one party is sitting down.

In Italy, in fact, cities were even constructed to allow the citizens to congregate. The distinguished Japanese architect, Professor Ashihara, in his *Exterior Design in Architecture* (Van Nostrand Reinhold), says: 'The Medieval Italian city is centripetal space, surrounded by walls, and the whole city is like one house with the plaza serving as a kind of living-room for the city as a whole.'

He goes on to quote Kidder Smith in his *Italy Builds:*

> *The square, or piazza, in Italy is far more than so many square feet of open space; it is a way of life, a concept of living. Indeed, it might be said that the Italians have the smallest bedrooms but the largest living-rooms in Europe. For the square, the street and the sidewalk are their living space, their playrooms, their front 'parlor'.*

And this is something that has lived on with the Italians: the Swiss found, after building lodgings on construction sites with single rooms for the Italian migrant workers, that the men really preferred dormitories. Most Mediterranean peoples, including the Arab peoples, have much the same idea. Perhaps only the Central Europeans, the people of the United States and the British have the concept of privacy in the city—a concept which, even among them, does not exist in the country districts.— Editor.

A HUNDRED years ago the great majority of people, both in the so-called Western countries and in Asia, lived in small towns and villages. Most people in Asia still do, though there has been a rapidly increasing concentration in big cities in this century. Anyone who has lived in a small town or village, as I have both in Scotland and England, will know how different it is from living in a city. I have not lived in a village in Asia but, from the little I have read about village life in India, I cannot believe that it is very different.

In a village everyone knows everything about everyone else. When you walk down the village street, probably the only one, you know everyone you meet by name, where he lives, to whom he is married, how many children he has and a good deal about his work, his character and peculiarities. He, of course, will know the same things about you. He could hardly help doing so since everyone lives so close to another and the total population of the village is, let us say, about five hundred. Men meet each other every day at work or in the pub at night. Women help each other with their housework or gossip over the fence or in the village shop. A hundred years ago, too, in Western countries almost everyone in the village would meet at least once a week in church unless, as sometimes happened, the village was divided into rival denominations.

Moreover since there were few other distractions, men and women were insatiably curious about each other. It was, in fact, one of their chief interests. In one village where I lived in Scotland, you could see, when you walked down the street, curtains twitch in the windows of each house you passed as the inmates peeped out to see where you were going.

There were both advantages and disadvantages in such a life. Some of the advantages were social. If, for instance, you knew that Robbie was a spendthrift—and you certainly would know—you would not lend him money or give him credit in the village shop. If you knew that Andrew was a drunkard, you would think twice before taking him home to supper. And if you knew that Charlie was a rake, you would not let him take your daughter to the village fair. On the whole this system worked fairly well for the benefit of all and probably prevented a lot of trouble. It was also true that while there was little privacy in a village, there was little loneliness. Everyone was included in the life of the village because

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e was really no alternative. People learned to be ant of each other and to be kind to those who were tally retarded or otherwise disadvantaged.

ut there were also drawbacks. Anyone who broke social and moral rules prevailing in the village was e to be ostracised and punished by popular disroval. This was particularly true of sexual adventures. or instance, a girl had an affair with a married man worse still, had an illegitimate baby, she could not sibly keep it a secret. Sometimes the village might remarkably tolerant about such things. In rural and and Scotland during the eighteenth and nineth centuries illegitimate children were often accepted the family without much fuss. At other times and er places a girl who had 'sinned' might find herself harshly treated. In that case she had no alternative to leave the village and settle elsewhere.

his is a very common theme in Victorian literature. mas Hardy was particularly fond of it. Everyone will mber the 'skimmity-ride' in *The Mayor of Casterge* when Lucetta is mocked by the townspeople for affair with Henchard. In *Tess of the D'Urbervilles* ss, after bearing a child to the dissolute young squire, D'Urberville, decides that she must leave the village ever. 'To escape the past and all that appertained eto was to annihilate it, and to do that she would e to go away.' In her case it was enough to go to her village a few miles away. Writing in an earlier Dickens, in *David Copperfield,* makes Emily, who had n seduced by Steerforth, and Martha, who had been ostitute, emigrate to Australia to feel safe from dal so that they can make a fresh start.

ose who left their village for the city found, and still a totally different life. In the city you can, if you live anonymously. No-one knows who you are. need not speak to anyone unless you wish. In alian cities today neighbours often live side by side ats or houses without even knowing each other's s. Even if they know their names, it is quite likely hey will, by mutual but unspoken agreement, never to each other or invite each other into their homes. s perhaps more true of middle class areas than of ng class areas but it is increasingly common in both. oubt such privacy is impossible in crowded slums Australia at least slums are being slowly abolished.

many people this privacy and anonymity are attrac- it creates a sense of freedom to live your own life. e no doubt that many young people still leave their in country towns for this very reason. To the young y offers not only far more opportunities and a circle of acquaintances but freedom from that of privacy and constant supervision which are an pable part of small town life. In a village a young nd his girl cannot even stroll down to the river in ening without being seen. In the city they are free periment with different partners and even to live together without the knowledge of their parents and friends.

But there is a price to be paid. Many who leave their villages or country towns to find privacy in the city, find loneliness instead. For the very conditions which provide privacy, also create loneliness. The young man or woman who fails to make friends in the city or whose marriage breaks down may easily find him or her self drifting on that vast sea of loneliness which social workers and psychologists are so well aware of. Although he or she is surrounded by thousands or even millions of other human beings, they are as remote, as unfriendly, as unknown as if they lived in another country.

I must confess, therefore, that I am always puzzled by books and articles which stress the threat to privacy in modern industrial society and big cities. To me it seems that there has never been so much privacy before in the history of mankind. This may explain why there is not more support for attempts to preserve privacy by legal means. The ordinary man in Australia does not feel that his privacy is threatened. I accept, of course, that there is a real danger to the individual citizen in the development of computer banks and credit ratings and security dossiers and so on. It is indeed important that the growth of these things should be controlled and that everyone should have the right to see and correct information which may have been collected about him without his knowledge. But all this has very little to do with privacy as ordinary people understand it.

We have, therefore, the curious phenomenon of one group of reformers and social workers concerned with the threat to privacy, and another group of social workers and reformers concerned with the danger of loneliness. No one seems to consider that the two may be closely and, perhaps, inextricably linked. Privacy and loneliness are two sides of the same coin: it is difficult to have one without the other. Those, for instance, who seek to avoid loneliness by going to live in a commune will inevitably sacrifice some of their privacy. There was no privacy in a primitive tribe: there is no privacy in a commune. (I should explain, perhaps, that I am not here referring to the peasant communes of Communist China though I don't suppose there is much privacy there either. Communists, who believe in the collective, do not put a high value on privacy).

In Western countries at least one still has a choice. One can live in a big city and enjoy privacy at the risk of loneliness or one may live in a small town — providing one can get a job — and escape loneliness at the risk of losing one's privacy. In the end, I suppose, everyone must make up his own mind which he prefers and which offers the greater risk. There are, of course, a few fortunate people who manage to have both.

John Douglas Pringle was formerly Editor of The Sydney Morning Herald. *He is now in active retirement. Articles previously published in this occasional series on privacy and loneliness are: 'Close-Wrapt Souls', January 1978, 'A Cage, No Bars', March 1978, 'Leave Me Alone, But . . .', October 1978.*

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THE MIRACLE OF MOVEMENT

H. Elliott McClure

E WILD cries from Vs of Canada Geese overhead, arrival of the swallows at Capistrano in Italy, as in opular song of a few years ago, the annual pilgrim- of robins—these are manifestations of bird migration of the equator that are well known. However, in of the world, bird migration is still not well under- L Before the 1960s little was known about the tion routes of birds in Asia. Arrival and departure had been recorded, maps had been drawn, much been conjectured, but there were essentially no ical data concerning where birds went and where came from. Extensive ringing in Europe during the ous decades had determined the routes of many es through the continent and into and out of Africa. Russians were banding in the fifties in eastern Asia, g series of egrets and herons being marked in a y at Lake Khanka which is north of Vladivostock. from this work showed up in Thailand and Malaysia. then there has been extensive ringing across a.

re had been some prewar banding in Japan and projects were started in 1960 in India and Malaysia, was not until 1963 that extensive ringing was ed throughout eastern and south-eastern Asia. This am lasted for eight years and since then work has ued in India and Japan. From the eight-year study arly a million and a half marked birds have come icant additions to what we know about their move- in temperate and tropical Asia.

as been shown that migration paths of nearly a thous- grant species across Eurasia can be grouped into reat flyways; Western European, Eastern European, sian and Eastern Asian. Within these flyways, each es or population follows routes which have evolved heir patterns of life and habitat usage. Discussions of why birds migrate, how they migrate, where and when, fill many volumes. The study in Asia has just begun and future work will greatly alter and augment what has already been uncovered.

Bird migration, unlike the simple north-south movements understood by the casual bird watcher, is a vast composite of movements related to each species, modified by the latitudes and altitudes of distribution and by the capabilities of the birds themselves. Migration is one of the most complex attributes of life known to science. It has evolved through the geological epochs and has been refined by climates, by earth movements and by the pliability of protoplasm itself. It is represented in all animal phyla and probably manifested itself soon after living things became mobile.

Each species has its niche and its needs, and migration or movement is modified to fill these requirements. Each species has evolved along different paths to do so. As in other manifestations of evolution, the rates and paths have been different, so that we can see its component parts among the birds that exist today.

Territory is an attribute of living things. A plant must have territory enough to supply its needs or it dies, and so with animals. Any given population parcels that habitat so that each small piece will provide individual or family needs. We can see fence lizards fighting over their fence, wild horses fighting for a harem and a range, or visualise dinosaurs or titanotheres battling for a territory or a mate. Birds establish territories as well, and battle for them. For the migrant there are two significant territories, the one in which it raises its young and the one where it winters. It remembers, demarcates, defends both.

Among fish, insects and other lower orders the guides that direct migration are implanted in their genes and

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we believe that there is little awareness or direction in what they do. But birds are among the most highly organised and specialised animals of the earth and they have two guides to lead them; the past awareness built into their genes which tells them when to migrate and in what direction, and present awareness based upon experience and their acute memories of place and upon their activity. It is true that juvenile House Swallows *(Hirundo rustica)* will leave the Amur River Valley of Eastern Siberia and fly to the forests and fields of Malaysia or Thailand without being guided by adults. But their memories tell them the exact farmyard or patch of forest to return to the next year; and, after having gone north, they remember the territory that they established for breeding and seek it on following years. They may even remember landmarks that they have seen along a four-and-a-half-thousand-kilometre route; river valleys, cities, mountain passes.

Non-migrants also have an inviolate breeding territory that they defend, but it is not well understood if they also defend or demand autonomy over a winter territory. Most seem to wander or search for food over a wider range when not breeding.

Bird movements are manifold. Should they all be included in a comprehensive definition of migration it would become cumbersome. Basically, migration is conceived to be *periodic* movements of a population from one place to another and *return*. *Periodic* is here considered to be indicating cyclic; and *return* meaning return to the same locality, and as individuals to the identical or nearby area they left. Accomplishment of this is affected by external factors, but the individual must be malleable enough to allow for and overcome the eventualities of migration.

Historically, or geologically, the dispersal of a species further and further from its point of origin would permit exploitation of new habitats and new sources of food, thereby allowing an expansion of population numbers. Palaeontology suggests that many species that are now temperate zone migrants make up genera that originated in the tropics. For example, fossils of primitive bulbuls or hornbills, which are tropical families, have been found in deposits which are now in the temperate zone. The movement of tectonic plates suggests that much of the temperate areas in present day continents would have been in tropical positions in past geological times. Maybe this was too long ago to affect the genealogy of present day bulbuls and hornbills, but certainly past climates were mild. Altered by the glacial period, the climate restricted the tropical forests to where they are today and confined the bulbuls and hornbills as well. Only one bulbul reaches temperate climates, and this one is migratory. All others are non-migratory.

In their expansion from the tropics many species developed populations that would breed in the north or south temperate climates. Even though the growing season was shorter than in their primeval homes, there was an abundance of food and possibly competition would be less. But these species, such as the flycatchers and thrushes, mainly insectivorous, must return to warmer climes when conditions become too inclement or hazardous. The end product that we see today in these families, and in the warblers, buntings and others that breed in the nearctic or palearctic and then fly to the neotropical or oriental zones in one great jump (really two jumps, one north, one south), could not have developed all at once. There would have been intermediate steps along the way. Today there are many species which encompass populations part of which nest in the tropics and part of which nest at various latitudes north or south, to the most northern or southern limits of their ranges. Each segment of these great mobile populations must be genetically so modified as to cope with the physical conditions of the environment in which they breed as well as that in which they overwinter.

Migration can be in any direction and of any length just so long as it is periodic, or it becomes purely dispersal or wandering, as in some species. (In Australia wandering has taken the place of migration).

Because of the rigours of our climate we who live in the north temperate zone do not see many examples of this simple dispersion, other than that related to the movement of juveniles from the home territory before they begin migration south. The history of the movement across north America by the English Sparrow *(Passer domesticus)* and the European Starling *(Sturnus vulgaris)* demonstrated the dispersal abilities of successful immigrants. We could cite the woodpeckers as examples of non-migrants that only disperse as juveniles from their parent's territories. In the tropics most of the non-migrant and non-wandering species demonstrate dispersal, only a few hundred yards as that of the Olive Bulbul *(Pycnonotus plumosus)* in Malaysia to flights of many kilometres across land, open water, and ocean channels as that of the White-collared Kingfisher *(Halcyon chloris)* in the Philippines. These birds do not return to their points of origin.

In order for a widespread species to be migratory and yet nest at all latitudes, the gene patterns must be exceedingly complex. Each segment of the population in motion has to be programmed with special triggers to stop their flight. Those species that migrate at night are apparently programmed to the positions of different celestial bodies or constellations and such responses would have to be set for different relationships to the ecliptic. The Black-crowned Night Heron *(Nycticorax nycticorax)* is a good example of this. It is almost circumpolar in distribution. In eastern Asia it breeds in dense colonies from Indonesia to southern Siberia. It only does it breed at these latitudes but it overwinters from the latitude of Japan southward. And it also migrates

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...g egrets in the colony near Tokyo. In only a few weeks, they will attempt the island-hopping route to the Philippines.

...ding evidence from those ringed as nestlings in ... suggests that about fifty per cent of the birds leave ... for tropical winter havens. Of birds reared in ... only about thirty per cent were migratory. Birds ... large colonies in Malaysia only dispersed over ...sia. Those from a colony in Java apparently did ...eave Java. With all of these populations mingling in ...wintering range what happens when word reaches ...to start north? Hormonal stimuli that initiate breed... ...end those in Java to their home colonies in Java. ... in Malaysia returned to the great nesting colony ... study in northern Malaysia. By definition this would ...gration, but we do not know how many fail to ... to these colonies and stop at others. They migrate ...ght and those that belonged in the colonies in ...n were switched off to stop there, and those from ... continued onward until they got their signals. Such ... of nocturnal migration is more than astonishing.

...complex and demanding as this is, it is not un... ...s. Should it be rigid, populations would be isolated ...ventually new varieties or new species would ...d and there would be no such vast worldwide ...ons of one form. The Cattle Egret *(Bubulcus ibis)* ...wned among ornithologists as a species which ...hin the past half century suddenly expanded its ...and changed its flight patterns. It crossed the ... Ocean into South America, spread north, entered the United States, and now breeds as far north as the New England States.

Pacific populations were not involved in this massive population shift. Here they appeared to be following age-old routes of migration. Those that were ringed as nestlings in Taiwan spread south and overwintered in a large fan through the Philippines into Borneo. The Philippines is a favoured overwintering grounds for those from Japan as well. The Cattle Egret is more insectivorous than the Night Heron, so cannot survive the winter where insects disappear or aquatic habitats are frozen. Therefore they all migrate to warmer climates. When we examined the recovery records we found that two Cattle Egrets which had been raised in a colony in Taiwan showed up in Japan in following breeding seasons. By what alchemy could this happen? There surely could be no hereditary pattern that would take them north of Taiwan. The explanation for this may be a simple one. In Luzon they became acquainted with Japanese birds, and joined their flock, possibly even making conjugal attachments. When the flock returned to Japan the Taiwanese birds went along with them, and overrode whatever stimuli told them to stop in Taiwan.

The Pintail *(Anas acuta)* offered another situation. Here we see that these ducks, which breed in Canada and which usually overwintered in southern United States,

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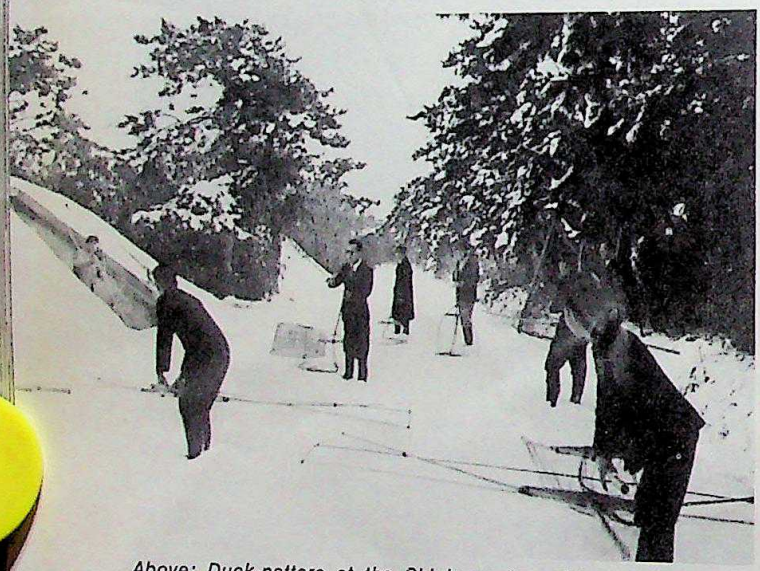
A Malaysian ornithologist removes a ringed bulbul from a net.



Above: Duck-netters at the Shinhama Imperial Duck Refuge in Tokyo. The birds they catch will return to Kamchatka or north-eastern Siberia; below: a White-breasted Kingfisher, a non-migrant resident of many of the cultivated fields of South-East Asia.

could exchange their wintering grounds for one in Japan. Ducks ringed as adults in southern United States showed up a year or so later overwintering at the Imperial Duck Refuge in Tokyo. And conversely a Pintail wintering in Tokyo was taken during another winter in California. Are we to assume that the breeding range of these individual birds is so great that they winter either in one continent or the other? Banding work in North America has indicated that puddle ducks (Pintail, Mallard *Anas platyrhyncos*, etc.) will select different mates through the years. The diving ducks (Redhead *Aythya americana*, Canvasback *Aythya valisineria*, etc.) are monogamous and less apt to change a mate, unless it is killed. Both kinds overwinter in southern United States and in Mexico and return to their ponds in Canada to breed. If they find these ponds dried up from drought, draining or otherwise disturbed, they may continue on north-westerly in search of suitable breeding pools.

Work with the Pintail demonstrated that they may continue north-westerly until they cross Alaska and the Bering Straits to find pools in eastern Siberia. This puts them in contact with Pintail populations that winter in Japan. Regardless of the distance from their winter range that they have travelled they are programmed to return to that range. Since Pintails are not monogamous for life this change in winter range from one continent to another suggests that the single bird from North America finds a Japanese mate and that the bond is strong enough so that the bird fails to return to North America but goes to Japan instead. And the same would be true in reverse.

The strength of the genetic programming directing a bird to return to its wintering range is demonstrated by many species in both continents. During the great glacial periods of the Pleistocene the glaciers both in northern North America and east and central Asia were not continuous, but left corridors that permitted east and west movements of animals. This break in North America followed the great Mackenzie River Valley. In Asia the glaciers were not as extensive as those in North America but there were large ice-fields in eastern Siberia and a great one in the region of western China. The area around Lake Baikal and possibly the Amur River drainage may have been free of glaciers. Since small birds have a generation each year, the use of these corridors could have been imprinted in their gene signals and such patterns would persist. This is demonstrated in Asia by many species. Swinhoe's Snipe *(Capella megala)*, for example, that winter in the Philippines and nearby lands breed in the vast plains and tundras in the region of Lake Baikal. They reach this area not by direct flight from the Philippines, which would carry them over harsh deserts, but travel north along the coast of Asia and then west inland to the breeding grounds.

The finches (Emberizidae) of the taiga, lands of low scrubby growth or evergreens, also demonstrated this east-west migration which may be related to previous

An Igorot

tion. They Mountains China. A H in Korea the Ural M most spec was seen i a). Millions and the Asia. In 18 breasted E ir popula before thi d. Even t gs nesting e is a ver e results migratory rranean or gs which d ca, but mov could be wa d. Banded

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An Igorot child from northern Luzon holds a Common Kingfisher caught en route *from Korea to north China.*

ation. They breed in the taiga as far west as the Mountains and then move east to Japan and China. A Hawfinch *(Coccothraustes coccothraustes)* ed in Korea was discovered on its nesting territory the Ural Mountains.

e most spectacular evidence of tenacity to a winter was seen in the Yellow-breasted Bunting *(Emberiza ola)*. Millions of these nest in the taiga of southern a and the conifer forests, and migrate to South- Asia. In 1825 the Russian ornithologists noted that w-breasted Buntings had begun moving west, extend- heir populations across Russia. A century was to e before this slowly dispersing population reached d. Even today the number of Yellow-breasted gs nesting in Finland is small.

re is a very active bird-ringing group in Finland e results of their work show that most of their migratory species spend the winter around the erranean or in Africa. Not so with their immigrant gs which do not join other species in the flights ca, but move east into Russia. How far this move- could be was shown by a bird captured in central d. Banded near Helsinki it was taken a year or so later among the many thousands harvested in Thailand for food. It had been imprinted to fly the many thousands of kilometres back along the route of its ancestors to eastern China and thence south into Thailand. Several species of buntings, including Yellow-breasted Buntings, migrate from eastern Siberia on a broad front across China and this bird may have joined them.

While all of this is going on among birds of temperate Asia, there is migratory activity in the tropics as well. We found that at least one species, the Open-billed Stork *(Anastomus oscitans)*, reversed the process. There is a large breeding colony of these storks at Wat Phai Lom just outside of Bangkok. Nesting starts in December and lasts into May, but the bulk of the young are fledged in March or April. The destinations of these birds appear to be to the north. None seems to have gone south, nearly all went in a northerly direction, and the bulk north-west as far as Bangladesh. During May, June and July juveniles from Bangkok were shot in Bangladesh for food, so the trip was made quickly after they had become independent. There are colonies of Open-billed Storks near Calcutta, but these migrants from Thailand apparently did not join them. The following breeding season,

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In Rajasthan, Spanish Sparrows roosting; they breed a thousand to two thousand miles north, in Central Asia.

Painted Storks, White Ibis and Intermediate Egrets nest in the same tree, although their migratory patterns are different.

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ged birds were back at Wat Phai Lom, so this pattern s to breed in the south and migrate north rather than reverse, which is usual in the north temperate zone. th of the equator the pattern of migration is the posite of that north of the equator, but, as the Open-ed Stork does not occur in Australia, we do not know it would react there.

Tropical migration was beautifully shown by results n ringing at Dalton Pass in Luzon. Dalton Pass lies a low mountain range near the central part of Luzon, th of Manila, between the two higher ranges running allel to the eastern and western coasts. Here, at a usand and seventy metres, birds passing over the ountains at night were attracted to or confused by hts and were caught in nets. From January to April e flights were mainly towards the north, and from ptember to December generally towards the south. metime in the shadowy past Igorot tribes living near e mountain tops developed this method of catching ds. Folklore has it that one night a hunter was lost in e fog on a mountain ridge. He was cold and built a fire d was sitting hungrily beside it with no food to cook. e god of hunters felt sorry for him and hurled a bird to his fire which he quickly cooked. From this the esmen learned to build lean-tos facing north and to ld a fire in front of them on cloudy or foggy nights certain months. Birds would then fly into the hut, ere they would be caught. Now they have improved e method by using pressure lanterns with reflectors standing behind them with large hand nets. As the ents, whether from north or south, fly toward these hts they are swept up into the nets. The harvest is very despread and the birds sold commercially for food.

Biologists at Dalton Pass bought these birds, thirty-five usand of them of one hundred and seventy species, m the netters; ringed and released them. From this it learned that many birds and species were from areas e north, China, Korea, Japan, Kamchatka. But also y species were local to Luzon, rails, quails, fruit ons, pittas, kingfishers and others. A great many e juveniles dispersing from their homes, but it became ent that the flights were periodic and included ents as well. These movements may have been ed to the rice-growing seasons in central and ern Luzon, but the flights were periodic and repeti- so it was migration that we were seeing. When we d our recovery records we found that this com- on of dispersal of young and migration of older showed movements to great distances from Dalton Twenty-two per cent of the birds were captured thirty miles of Dalton Pass. Forty-three per cent had flown up to ninety-six kilometres, fifteen per eached one hundred and forty-five kilometres, seven ent one hundred and ninety-four kilometres, three ent two hundred and forty-one kilometres and five ent were taken beyond two hundred and ninety tres in locations among the southern islands.

Thousands of Yellow-breasted Buntings end up in Bangkok markets after migrating from the taiga region in southern Siberia.

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All of this movement was within the tropics and in one island archipelago.

The Cattle Egret illustrated wide distribution to the south from limited breeding areas in the north, birds from colonies in Taiwan wintering in a vast area that stretches to Borneo. House Swallow migration illustrated the reverse of this. Great flocks of swallows roost each winter on the utility wires in towns and cities of Thailand and Malaysia. These flocks draw their birds from a wide area of eastern China to the Amur River Valley. It is a great fan of swallows that sweeps north crossing Thailand, Laos, Burma and gradually spreads east and west. Not all of the swallows bred from Ussuria and the Amur River Valley through Korea and into Japan take this route. Others from Korea and Japan swing east and south to go down the Ryukyus to the Philippines, thence westward across Borneo and the South China Sea to Malaysia. We had little evidence that they returned north via the Philippines. A few recoveries from Vietnam suggested that those remaining in the Philippines cross to the coast of the continent before going north.

Flocks of swallows wintering in Taiwan used cane fields as their nightly roosting places. Such fields are short-lived since the cane is harvested during the winter, so the birds are subject to constant interference. When one field was cut they sought another. This confused their homing instincts and resulted in a maze of movements, individuals wandering from field to field in the same or succeeding years. The birds tended to return in following years to the area of fields from which they had migrated north the previous year, but were again forced to move as these fields were harvested. In Thailand there is a similar situation with migrant buntings as well as swallows using the cane fields. Here the birds are not only forced to move by harvest of the cane, but whole flocks are decimated by netting for commercial usage, food, pets, etc.

Taxonomists are interested in the development of sub-species, which in many instances they attribute to isolation of population segments. Sub-speciation then would be difficult if populations of wide-ranging species mixed completely. Evidence indicates that there may be discrete populations even in vast ranges. We have already shown that wide-ranging species may have different gene patterns to permit them to breed at different latitudes and yet be in association on their winter ranges. Other species have discrete populations that appear rarely to intermingle. The ducks across northern Asia apparently fall into this category. There was a banding team in north-central India at Bharatpur wildlife refuge and one in central Japan near Tokyo, six thousand four hundred kilometres east. Teal *Anas crecca,* Pintail, Gadwall *Anas strepera,* European Widgeon *Anas penelope,* Pochard *Aythya ferina,* Tutfed Duck *Aythya fuligula* and others banded among winter flocks at these two locations flew north; travelling north, north-easterly or northwesterly to their breeding grounds. Between them the one-hundred-and-twentieth meridan was an unmarked boundary. Few from either flock crossed beyond that point. Had there been a similar study at some point half way between Bharatpur and Tokyo, say, the marshes of the lower Irrawaddy River, we would probably have found ducks whose summer ranges overlapped with the other two. Such intermingling would prevent isolation and sub-speciation, but still the existence of discrete gene imprints dividing widely separated segments of the overall population is evident.

This phenomenon was noted not only among the ducks but among shorebirds as well. The ring recoveries from sandpipers and snipes that nested deep in Siberian tundras also suggested that there were genetic differences in population dispersion. However, because of their relationships to the seas as well as to continents, shorebirds have great variations in migration patterns; from that of the Turnstone *(Arenaria interpres)* which breeds in Kamchatka, migrates east through the Pribilof Islands and south to the islands of the central and southern Pacific, thence north along the west Pacific Islands to Japan and back to Kamchatka, to that of the Ruff and Reeve *(Philomachus pugnax)* which makes some of the world's most prodigious flights. The Ruff and Reeve, rarely seen in the new world, breeds in the tundra and across Eurasia. It also winters across southern Asia so probably demonstrate population segments similar to the sort noted in the ducks.

Earlier we mentioned that the positions of glaciers probably affected migration paths of modern birds. The Scolopacidae, the family to which the Ruff and Reeve belongs, has great antiquity, fossil evidence suggesting that shorebirds originated as much as sixty-five million years ago during the Palaeocene. Recent research has indicated that since these ancient times movements of the tectonic plates have changed the positions of India, Australia and eastern Asia (Japan, Philippines, etc.), but all during this great span of time Asia and Africa have been contiguous. So we see the Ruff and Reeve making annual pilgrimages from lands as far away as Yukutia near the Bering Sea across the length of Asia south westerly into Africa to central and southern Africa. Such is the stuff that genes are made of.

Dr. McClure, born in Illinois, U.S.A., began as an entomologist, became interested in ecology and 'gravitated into ornithology'. He went to Asia in 1950, and, as he says, 'fell in love with the people and the ecology and spent the next twenty-five years exploring the bird and insect life of eastern and south-eastern Asia.' He now lives in retirement in California.

An Intermediate Egret at its summer home in Japan; it winters in the rice-fields of Luzon.

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A WALK IN OLD KYOTO

Harold Stewart

Photography: Gwen and Jim Smith

The Australian poet, Harold Stewart, who lives in Kyoto, has prepared a chapter for a projected guide book to the ancient capital of Japan. But it is a guide book with a difference: it is an informed and entertaining description of a walk to the Kiyomizudera, the Pure Water Temple, with directions given, not so much as in the usual guide book, but in a more leisurely, more neighbourly way: by indicating the routes (with variants, so you may study them in advance) of getting to the temple, using shops selling bamboo and Buddhist holy objects, or cafés and restaurants and beautiful buildings as map references.

The first of two parts of the description of this walk to the temple appears below.— Editor.

GUARDING the two-storeyed Main Gate of the temple are two roaring mythic lions of granite, post-war replacements for the ornate bronze ones which used to stand here but were melted down for their metal. This gate is the oldest structure still extant at the temple and dates from 1478. It is sometimes called the *Akamon* or Red Gate, because it was once coloured with vermilion, but this has long since faded to a more attractive greyish pink. Its proper name is the *Niōmon* or Gate of the Two Kings; and if you climb the short steep flight of steps in front and peer into the two stalls on either side of the entrance, you will discover why. Inside stand those two gigantic guardians of demoniac aspect who ward off evil influences and prevent them from entering the temple precincts. At the feet of such statues straw sandals are often left as offerings by pilgrims, to prove that they have fulfilled their vow to visit the temple. In the old days these statues were peppered with pellets of paper: fortune-telling slips which the pilgrim chewed and spat at the statues. If they stuck, it was believed that one's petition to the Niō would be granted!

An alternative ascent to the higher level is offered by the easier gradient of the steps to the right of the gate. These pass an ancient twisted pine-tree, its weight sup

'The most imposing sight of Kiyomizudera's verandah fro below, supported by its grove of tall columns and cross-beam

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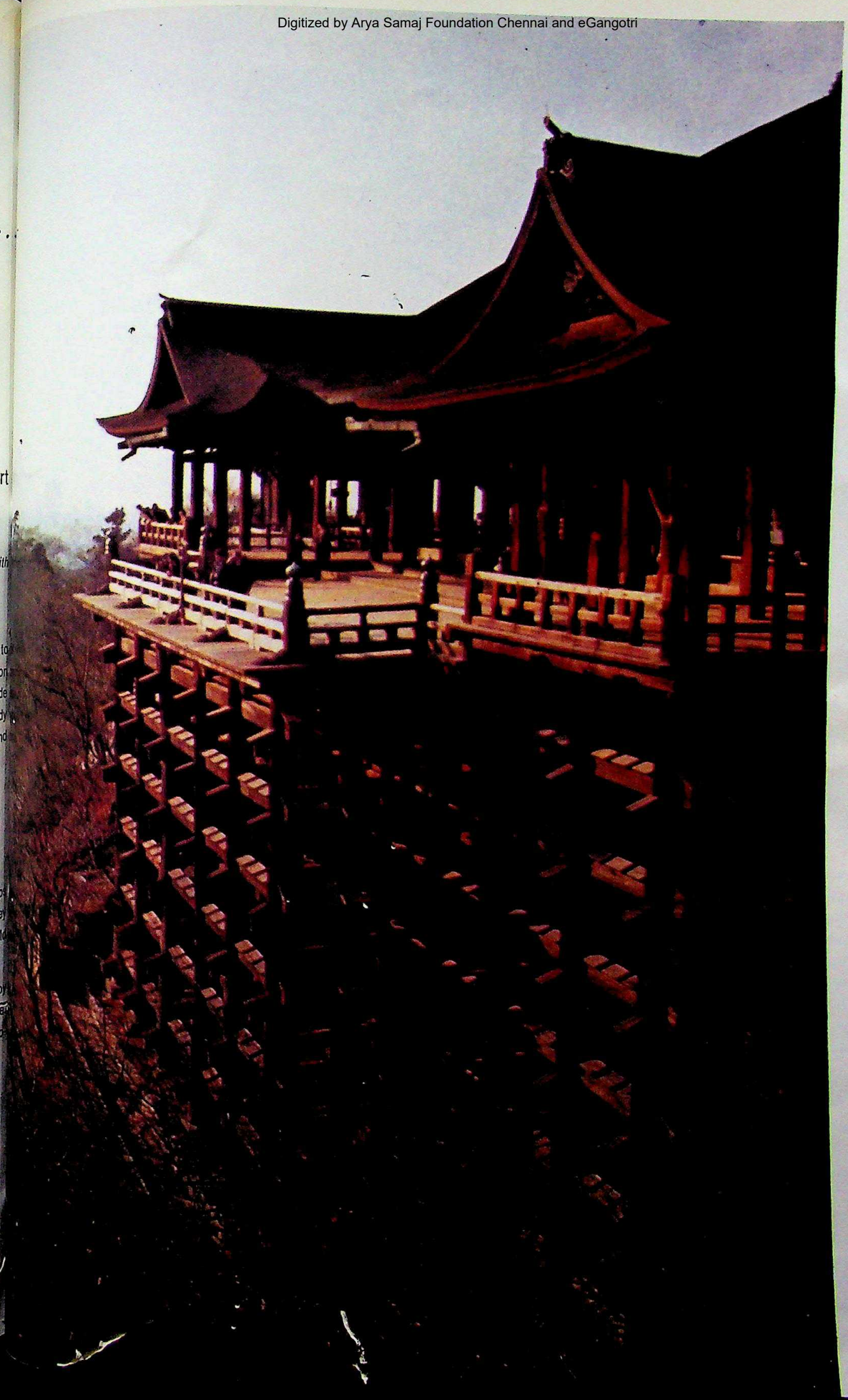

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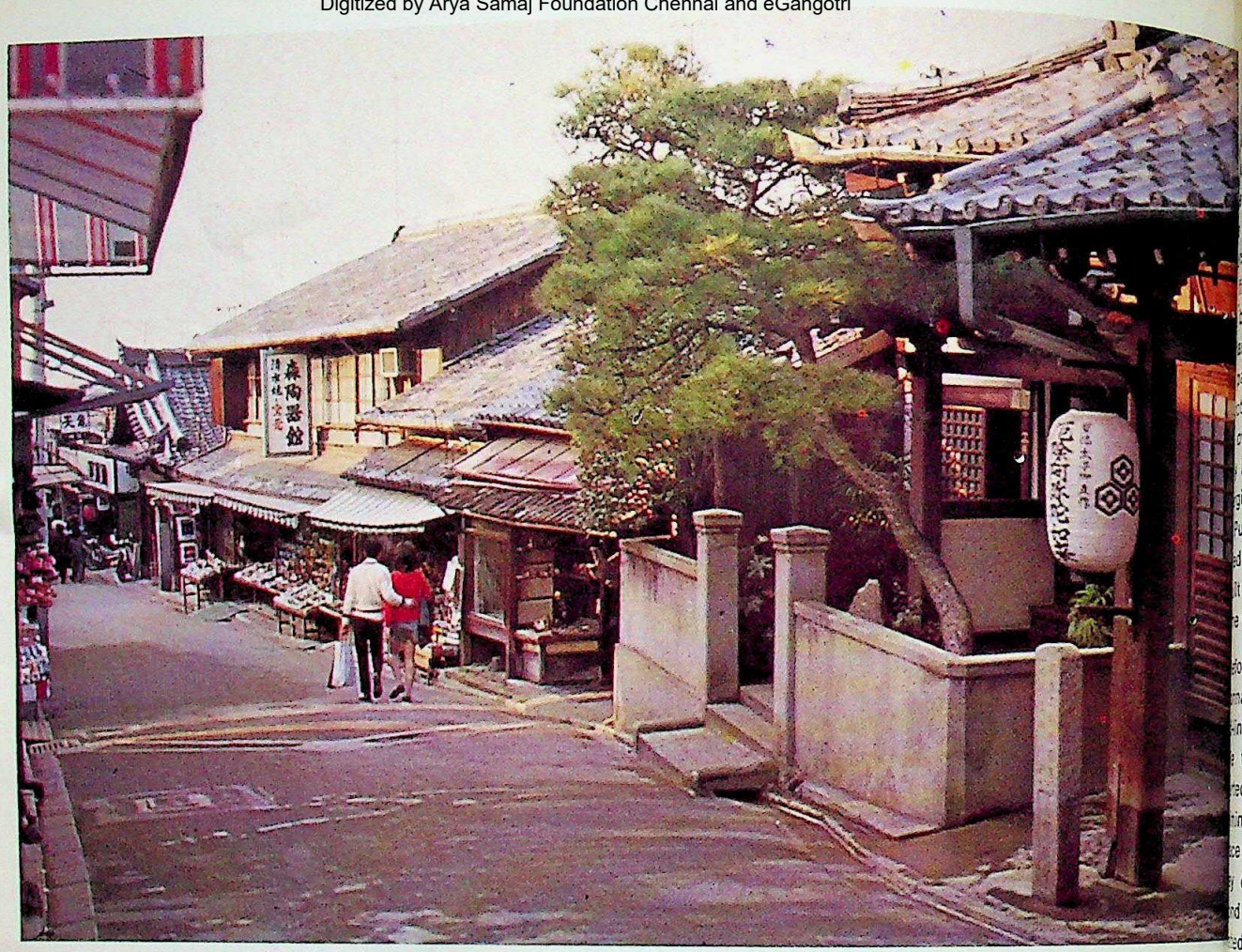

'Teapot Lane', one of the main ways of approaching Kiyomizudera.

ported on a bamboo frame, lest it break under the weight of snow on its branches. Higher up, also on the right, is the *Saimon* or West Gate, which dates from the Momoyama Period (1582-1615) but is only used on ceremonial occasions such as an imperial visit. It stands directly in front of the three-storeyed pagoda and contains statues of the *Shitennō* or Guardian Generals of the Four Directions of Space. On your left as you ascend these steps is the *Shōrō,* an open Belfry, last rebuilt in 1607, but containing a large bronze bell, struck on the outside rim by a wooden beam swung on ropes, which is dated 1478.

Steps and a path to the right now guide you past the *Sanjū-no-tō* or Three Storeyed Pagoda, originally erected in 847, though the present structure dates from 1633. It contains mural paintings of Buddhas, Bodhisattvas and celebrated priests of the sect on its inner walls and columns; while on its altar rests a statue of *Dainichi Nyorai,* the Great Sun Buddha; but the public is not admitted to view these. From the granite railing on the parapet beside the pagoda, a panoramic view of the lower half of Kyoto city spreads below: in the foreground, the Front and West Gates; in the middle distance, the Yasaka Pagoda; while the far-off Nishiyama or Western Range forms a hazy blue backdrop.

Returning now past the pagoda, on your right an ancient wistaria spreads over a refreshment stall; while on your left the *Kyo-dō* or Sutra Hall contains both the sacred Buddhist scriptures and a statue of Shakyamuni, the historical Buddha, with his two attendant Bodhisattvas, *Monju,* symbolising Wisdom and *Fugen* symbolising Compassion. On its ceiling is painted a coiling dragon like that usually to be found in a Zen Lecture Hall, for which purpose this building was also used.

Beside it stands the Founder's Hall or *Tamura-dō,* named after its donor, Tamuramaro, who in the early ninth century was the first successful general to receive the title of Shōgun. The present hall houses his statue as well as that of the priest Enchin who actually founded Kiyomizudera in the year 798, so that this temple is older than the city of Kyoto itself. It belongs to the *Hossō-shū* a sect brought to Nara in 655 from China but ultimately deriving from India. Kiyomizudera is No. 16 in the pilgrimage around the thirty-three temples dedicated to Kannon, Bosatsu, the Bodhisattva of Compassion, in the Kansai south-western division of Japan. You are now facing the

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Gate or *Todoroki-mon,* which means literally Gate verberations. Buy your ticket of admission at the on the right; and then, before you cross the little bridge leading to the gate, lave your hands and out your mouth with the fresh cool water which s from the jaws of the bronze dragon, cast in 1861, ls the water-tank beside the bridge. If you care to ack at this point, you will be rewarded with one of mous views of this temple: the two halls and pagoda ssed, silhouetted against the sky. The Todorokimon ected by two of the Shitennō in stalls on either side; verhead as you pass through, you will observe a latticed bronze lantern. To your left immediately on ging from this gate lies the *Asakura-dō* or Hall for ursuit of Truth, named after the devotee who pre- d the original in 1510, though the present replica was t in 1633 after the disastrous fire that razed most e temple buildings.

fore you walk along the recently reconstructed nade to the *Hondō* or Main Hall, notice how its ine follows in parallel the dome of *Otowa* Hill behind, the gable-roofs on its wings repeat this curve, ed and reduced in scale. Look down the steep stone ing wall with its slight 'batter', which supports the e on which the temple stands. Then gaze across the of maples and cherry-trees beneath, to where a d smaller three-storeyed pagoda is picturesquely d on the crest of the hillside opposite, to which hall be going later on in this walk.

the far end of the colonnade stands a wooden rack g some curious pieces of ironmongery. Although n as Benkei's sandals and staff, these were actually ht by a Kyoto blacksmith in the Meiji Period (1868- . He had gone blind, but after praying fervently to Kannon of Kiyomizu, his sight was miraculously ed. So as an expression of his gratitude, he made gave these examples of his craft to the temple. i, the Japanese Hercules, was a warrior monk of iddle ages, noted for his feats of strength. You have no difficulty in lifting his iron *geta* or pattens, ven his lighter *shakujo* or alarm-staff with its six rings that jingle to frighten off any insects or other deer that might otherwise be accidentally trodden oot. But no one to our knowledge has yet succeeded ing his great staff for ceremonial occasions.

you can step up on to the veranda of the Main last rebuilt in the original style in 1633 and con- d entirely of wood without the use of nails. The g is divided into three main parts: the inner n *(Nainaijin)*; an outer portico with picture-gallery); and the veranda, once used as a stage for nial dances *(Butai)*. First, the inner sanctum with stone-paved floor is founded on the rock that nts a ledge on the hillside. Its main image, five height, is the *Senju Kannon,* or Bodhisattva of ssion with Eleven Heads and a Thousand Arms,

Window-shoppers in Teapot Lane.

to see and save all suffering beings throughout the universe. This statue is enclosed in a central black-lacquered shrine, while in similar shrines to its right and left are hidden statues of *Bishamonten,* Guardian General of the North, and the *Shōgun Jizō.* Jizō is usually the Patron Bodhisattva of travellers and children, and rescues the self-damned from their sufferings in the underworld. But in this rare form he is represented in armour with a helmet like a general, doubtless because of the donor Tamuramaro's military profession. All three images are 'secret statues', shown to the public, and even seen by the priests themselves, only once every thirty-three years. They stand on a gorgeous altar of red and black lacquer with gilt bronze decorative fittings; and are accompanied by smaller statues of the Niō and the twenty-eight

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On the way to the Temple: a textile shop with the oldest noren *(a hundred and sixty years old) in Kyoto. The name of the shop is printed on the* noren, *or curtain, and 'when the business changes hands its new owner acquires the goodwill by buying the noren.*

attendants of Kannon (such as you can also see life-size behind the altar of the Sanjūsangendō).

Second, in front of the adytum and under the same roof is the *Naijin* or pronaos, which is an open-sided, many-columned gallery, like that attached to a Shinto shrine. Inside, some thirty large framed votive pictures hang high up under the beams. Many are of artistic or historical interest, notably those depicting the officially sanctioned Dutch trading-ships of the seventeenth century, the *Suminokura-bune* and the *Sueyoshi-bune*, which bear the date 1634. Be sure to look out for a painting at the back of the western end of the vestibule where you enter: the strongman Benkei is supporting on his flexed forearm Ushiwakamaru, as the brilliant young general Yoshitsune was called during his boyhood. It is related that Benkei stood on Gojo-Ohashi or Fifth Block Bridge, where he challenged every swordsman who attempted to cross it, until he had defeated ninety-nine. The hundredth to approach was the sixteen-year-old Yoshitsune, who disarmed his formidable opponent (weighed down by his vaunted iron *geta*) by leaping nimbly over Benkei's head, and knocking his weapon out of his grasp while in mid-air! After this humiliation, Benkei became Yoshitsune's faithful vassal and bodyguard for the rest of his master's short life of twenty-six years.

At the western end of this veranda, a big lacquered statue of Daikokuten, the Shinto-Buddhist god of wealth, merchants and farmers, stands on his rice-bales and carries his bag of provisions over his shoulder and his magic mallet that grants all wishes in his other hand. He is therefore very popular and receives many offerings from devotees who wish to get rich the easy way. Services for the laity are conducted in this outer hall before a secondary altar, above which hangs an ornate bronze lantern as well as an ancient *kakebotoke*, or bronze medallion with small Buddhist figures in high relief. In this open gallery used to sit the audience of nobles, warriors, and high-ranking clergy, to watch the ceremonial dances performed on the outer veranda. The two gabled roofed wings on either side are called *gakuya* and house the musicians of the orchestra of wind, strings, and percussion. Third, in front of the temple proper and without any roofing extends a wide balcony, the famous *Kiyomizu no Butai*, or boarded dance-stage, protected by a railing in front and supported, as we shall see presently, on gigantic piles. This stage borrows as its name

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...op the scenery of the valley below and hills ...d.

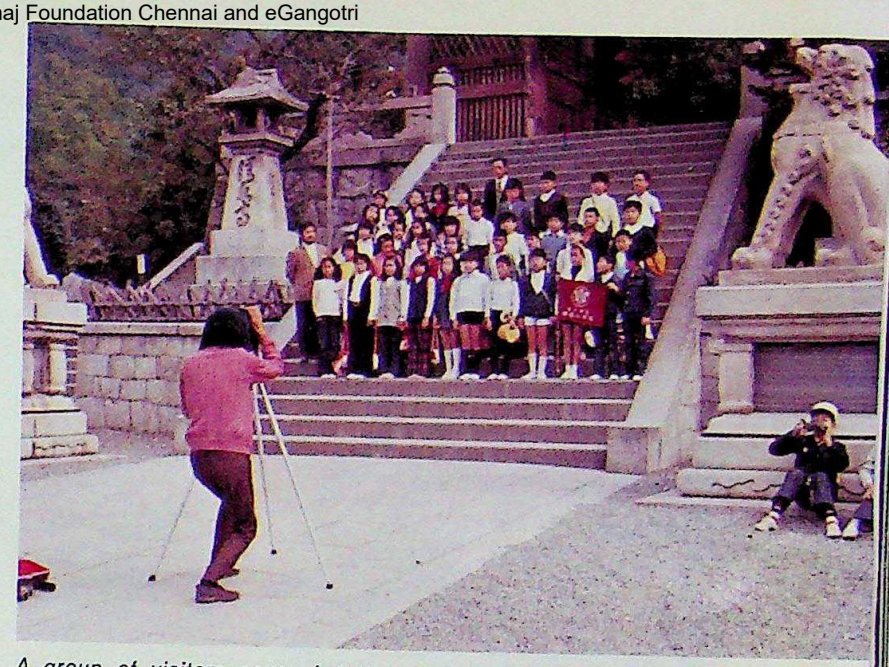
... to the edge of this platform and look over: ...h and to the left, you will observe the *Otowa-no-* ...r Sound-of-Feathers Waterfall. Its clear cold water ...ducted along granite channels from a hidden spring ... hillside above, and then falls in three streams in ...of the little shrine dedicated to *Fudō Myōō,* who ...ts from fire but whose stone image is half-hidden ...tains on the middle altar. In the pool below, ascetic ...s, wearing only white cotton shifts, still sometimes ... on the stone pedestals and allow the waterfall to ... over them as a rite of purification.

...tinue to walk east along the upper veranda and ...ill come to the temple office, where the official ...of the temple are stamped in the albums of pilgrims ...ecord of their visit. Sometimes the seal-impressions ...inted on a length of silk with a central painting of ...n; and when this has received the vermilion stamps ... the thirty-three temples on the pilgrim-route, it is ...ed as a *kakemono* or hanging scroll and proudly ...ed in the *tokonoma* or alcove of the house. Before ... the eastern end of the veranda, look up at the ...d *ema* or votive painting of a black horse on a ...d of golf-leaf, hanging under the rafters of the hall.

...ediately behind the Hondō, a flight of steps, lit at ...by little red lanterns on poles, ascends to the ...*Gongen,* a Shinto shrine on the summit of the hill. ...ghtly coloured architecture affords a marked con- ... the subdued browns of the temple, and consists ... principal buildings: the *Haiden* or oratory and the ... or main sanctuary. An extra ticket is required to ...ese.

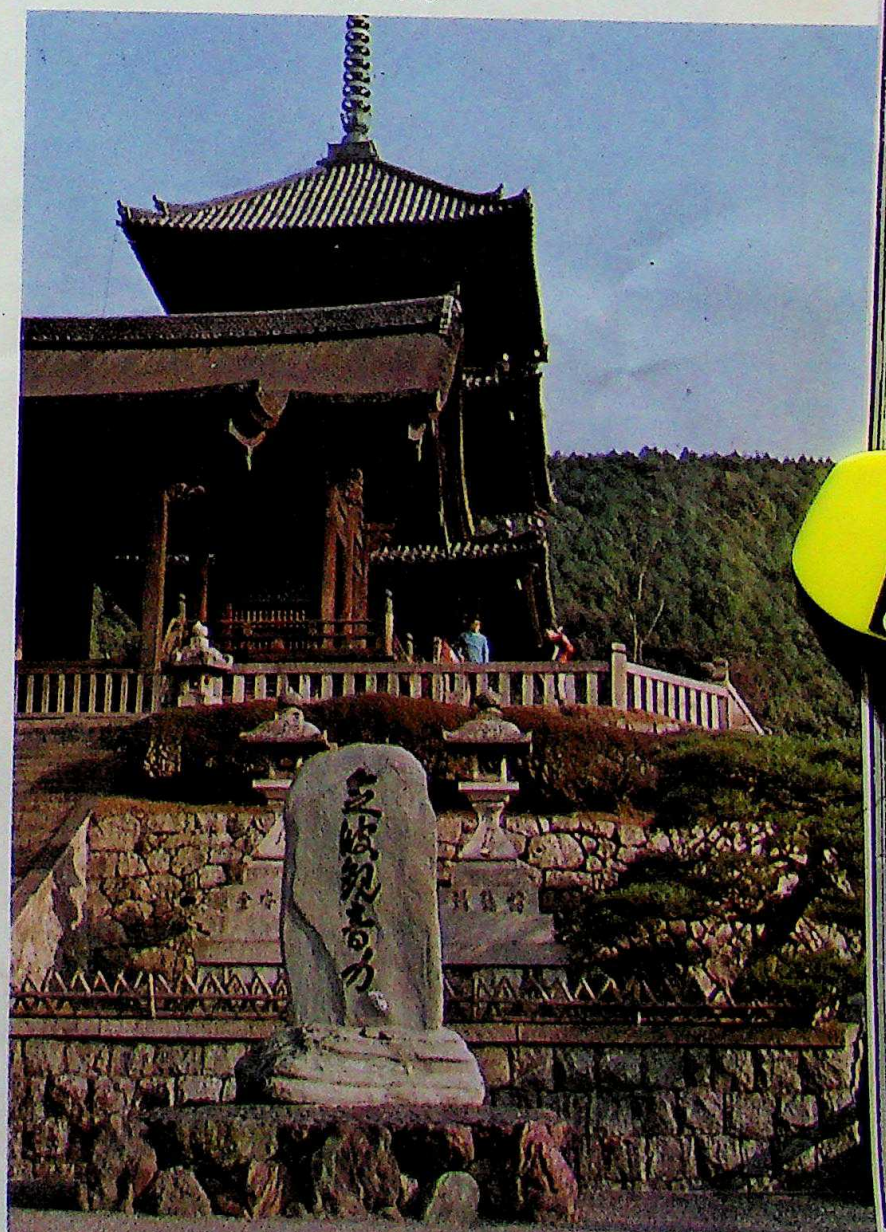
...ot take the long flight of stone steps on the right ...descends to the waterfall below, unless you wish ...ail this walk; but instead go straight ahead to ... *Shaka-dō* or Hall of Shakyamuni, the historical ... whose statue is enshrined within between his ...endant Bodhisattvas. This building was recently ...ucted in the original style, after a disastrous ...e had destroyed the older hall. Next door, we ... the *Amida-dō* or Hall of the Buddha of Boundless ...d Life, whose large image is seated on the altar ...acked by a halo of gold in which can be glimpsed ...nd little figures of other Buddhas who have come ... parts of the universe to hear his preaching. ... in somewhat poor state of repair, coloured ... of heavenly beings *(tennin)* in Amida's Western ... can still be discerned on the walls and ceil- ...da is attended by his two Bodhisattvas, *Seishi* ... and *Kannon* (Compassion) to your left and

... steps from the Amida-dō bring you to the ...n or Inner Temple, which we first glimpsed from ...nda of the Hondō and which is similarly sup-



A group of visitors poses between the roaring lions at Kiyomizudera. The lions 'ward off evil influences and prevent them from entering the temple precincts'.

The Saimon, or West Gate, 'only used on ceremonial occasions such as an imperial visit. It stands directly in front of the three-storeyed pagoda.'



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The Otawa-no-taki, *or Sound of Feathers Waterfall, whose 'clear, cold water is conducted along granite channels from a hidd spring in the hillside above'.*

ported by tall wooden piles on the cliff above the stone staircase. It is likewise dedicated to Senju Kannon and enshrines images of the twenty-eight attendants similar to those in the Main Hall. Now turn around, and from the veranda of the Oku-no-in you can admire the most celebrated view in Kiyomizu: the Hondō with its magnificent *hiwadabuki* roof of cypress-shingles, carved into massive bow-curves with delicately scallopped corners and dipping gable-roofs on its side-turrets. You can now clearly survey the elaborate underpinning necessary to support the Butai or dance-stage, each column consisting of an entire cedar trunk; while where they intersect with the cross-beams, little subsidiary board-roofs shed the rain and snow to prevent the wood from rotting.

Descending from the veranda of the Oku-no-in at its southern or right-hand end, take the short path leading up to a small side gate, and on passing out of this, you will find yourself on an earthen track through the natural forest of the hillside. Continue still along this path, which at one point allows a foreglimpse of the little pagoda on its eminence opposite which is our goal, and soon it will descend and divide into three. Take the left-hand branch which ascends a cutting in the hillside, not the steps in front or the path downhill to the right, and it will cur around the hilltop toward the right, until you catch sig beams, with of the small three-storeyed pagoda. This is known as t on the right *Kōyasu-no-tō* or Fertility Tower, and along with its su to explore temple behind, *Taizanji* or the Temple of Gentle Deliver offers som was moved here across the valley in 1908-9 from t you can tal former site near the Front Gate. The Kannon of Kiyomiz now. Straigh has for centuries been famed for her help in ensuri ed around easy childbirth. taste the

In front of this pagoda, the landing that faces nor from the s commands a splendid panoramic view of Kiyomizudera buildings from the Hondō to the Front Gate, all restin complete on the terrace retained by the high stone wall. Ne along the descend the stone steps to the right, and halfway dow passing an opening in the trees permits a second glimpse of t and you wi large three-storeyed pagoda against the sky with Nish n-ledge ab yama in the background. At the foot of the steps, whe come to some *sekibutsu* or stone Buddhas as old as the temp a tall s sink into oblivion, you should choose the path downh tea-houses to your left. turns nort

After a short stroll under the maple-trees, you can ga teps by wh up at the most imposing sight of Kiyomizudera's veran the Front from below, supported by its grove of tall columns a north of old stone

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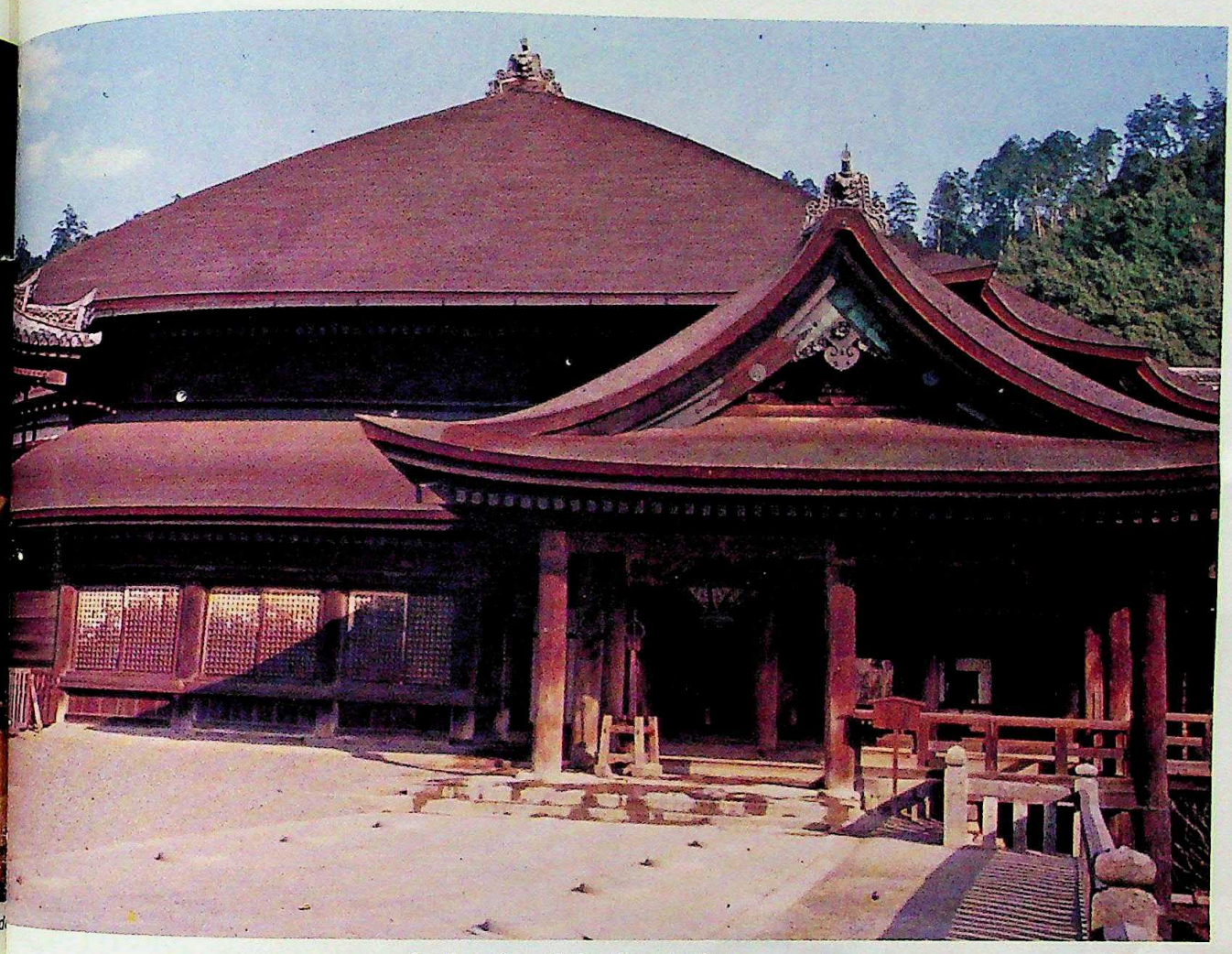

Another view of the Kiyomizudera.

...ams, with the long descending flight of stone ...on the right. A path to the left can be taken if you ...o explore the valley of maple and cherry-trees, ...offers some delightful walks; while a balcony on ...you can take refreshments is built over the water-...low. Straight ahead on your right visitors will be ...ed around the Otowa-no-taki, where you, too, ...taste the purest of spring water, caught as it ...s from the stone channels overhead in long-handled ...

...complete your circumambulation of Kiyomizu, ...along the path to the left under the Hondō's ..., passing the wooded valley below. Soon look ...nd you will see the Oku-no-in high up on its ...n-ledge above the tree-tops. A little further on ...come to a small but pleasant garden with pond, ...a tall stone pagoda; and nearby will notice ...tea-houses scattered about the grounds. Here the ...turns north, above the azalea-banks at the head ...teps by which you first ascended, and brings you ...the Front Gate and the upper end of Teapot Lane. ...north of the Hondō, near a hillock covered with ...old stone Buddhas and steles, lies the *Jōjuin* or Temple of Achievement. It was erected in the sixteenth century and is the residence of the Abbot, who is now over one hundred years of age, and the priests' quarters. It has a beautiful garden, first laid out in the Muromachi Period (1392-1490) and later renovated by the celebrated garden-designer Kobori Enshū in the Momoyama Period. Its notable features are a strangely shaped stone like a piece of abstract expressionist sculpture, a stone lantern, and a water-basin which resembles a hanging kimono-sleeve, all presented to the temple by the great general Toyotomi Hideyoshi. But this temple is usually open to the public only for one week in the year, during the Special Opening of the Closed Cultural Assets in November. So if you are fortunate enough to be in Kyoto at that time of the year, make a particular point of viewing this garden.

(To be continued).

Harold Stewart, a distinguished Australian poet, has been living in Kyoto for a number of years.

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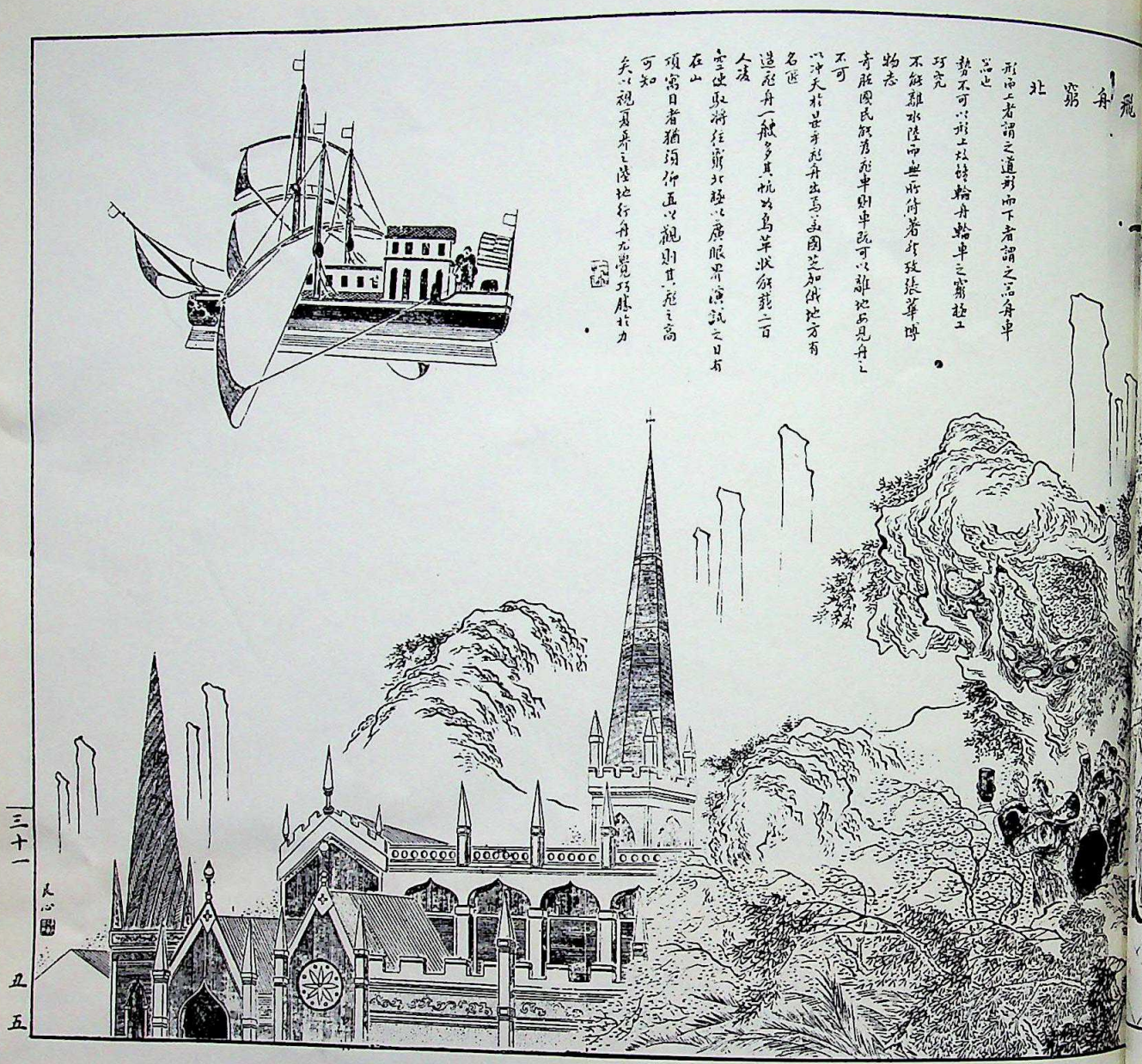

'THE ILLUSTRATED SHANGHAI NEWS

QUITE a number of things and ideas the British exported to their former and present colonies were good ones. So it is that the city of Shanghai had its own version of *The Illustrated London News*, from 1884 to 1898. Fifty-two of its engravings from *The Lithographic Studio* (the full title of the magazine was *Tien-shih-chai Hua-Pao*) have been selected, with the original and an author's commentary for each, to make a charming and nostalgic book, *Shanghai Bildzeitung*, published by *Atlantis*, a Swiss and German publishing house (ISBN 3 7611 0523 1).

Nineteenth-century China was a troubled place, particularly towards the end of the period covered, with Germans, Russians, English and French occupying various parts of the country, and *The Illustrated Shanghai News* must often have provided a welcome relief from war and occupation. To the *News* writers and painters, the world, viewed from where they were, must have seemed an agreeably puz... place, and the discovery, even at second hand, of ... Europeans, was a fascinating experience, as the pict... and original texts, selected by a former German ... correspondent and diplomat, Fritz van Briessen, cle... indicate. (The painters and the editorial staff ... Chinese, although the magazine was founded and ... by an Englishman).

The information presented to the readers of ... *Shanghai Illustrated* must have been as curious to ... as would have been news of China to Europeans ... Americans at this time, for the transmission of new... information is a bit like the old whispering ga... children's parties, in which one person whispers a ... into his or her neighbour's ear; by the time the ... gets back to the first speaker, it is totally unintel...

Shanghai re... the toughn... about Bis... 'The Germ... elligent . . . ... They w... ppy. Then, s... w, the odd ... o his frien... d, because ... dship he w... ut I can s... nderstandab... d grasping ... g Bismarc... oyance gav... ved . . . ... again and ... ntry, a little ... According ... hua, a flyin...

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Shanghai reader must have wondered about criti- the toughness of Chinese warlords when reading about Bismarck, which started off innocently 'The German Chancellor Bismarck is very lively elligent . . . One day, he went hunting with a . . They wandered over hill and dale and were ppy. Then, suddenly, the friend fell in a quagmire'. w, the odd twist. Bismarck refused to hold out a o his friend, telling him that he could not save d, because if he tried, both would die. But, out dship he would shoot him. 'I cannot save two t I can save your soul'. The friend, whose derstandably, was beating madly, found a tree- d grasping it, hauled himself to safety and g Bismarck: 'My trick worked, because distress yance gave you superhuman strength and you ved . . . His companion understood and was again and they went home'.

entry, a little before its time, was about a ship of According to the *Encyclopaedia of Rarities*' of hua, a flying waggon has been constructed in America. One might well consider that, if a flying waggon can be made, an airship could be constructed. In fact, an engineer in Chicago has developed an airship with many sails. It looks like a plumed bird, and can carry two hundred passengers. The airship will undertake a research expedition to the North Pole'.

There is a magnificent story about the hospitality of the Viennese: a solitary Chinese visitor, in his robes and cap, sits among twenty or more of his Austrian hosts, all looking with interest at a five-tiered fountain, seven metres high, according to the text, each of the basins and illustrations, decorated with pretty girls.

Women's role in sport is nothing new: in unarmed combat, a group of Chinese girls, according to an 1888 report, took up the sport successfully, while the resourceful widow of a Chinese migrant worker in Germany, who was left in poverty after her husband's death, with Chinese relatives gave street performances of athletic Chinese stick-dancing. One day, they were seen by 'the wife of a highly-placed public servant' who asked the dancer-singers to her house, where they gave a

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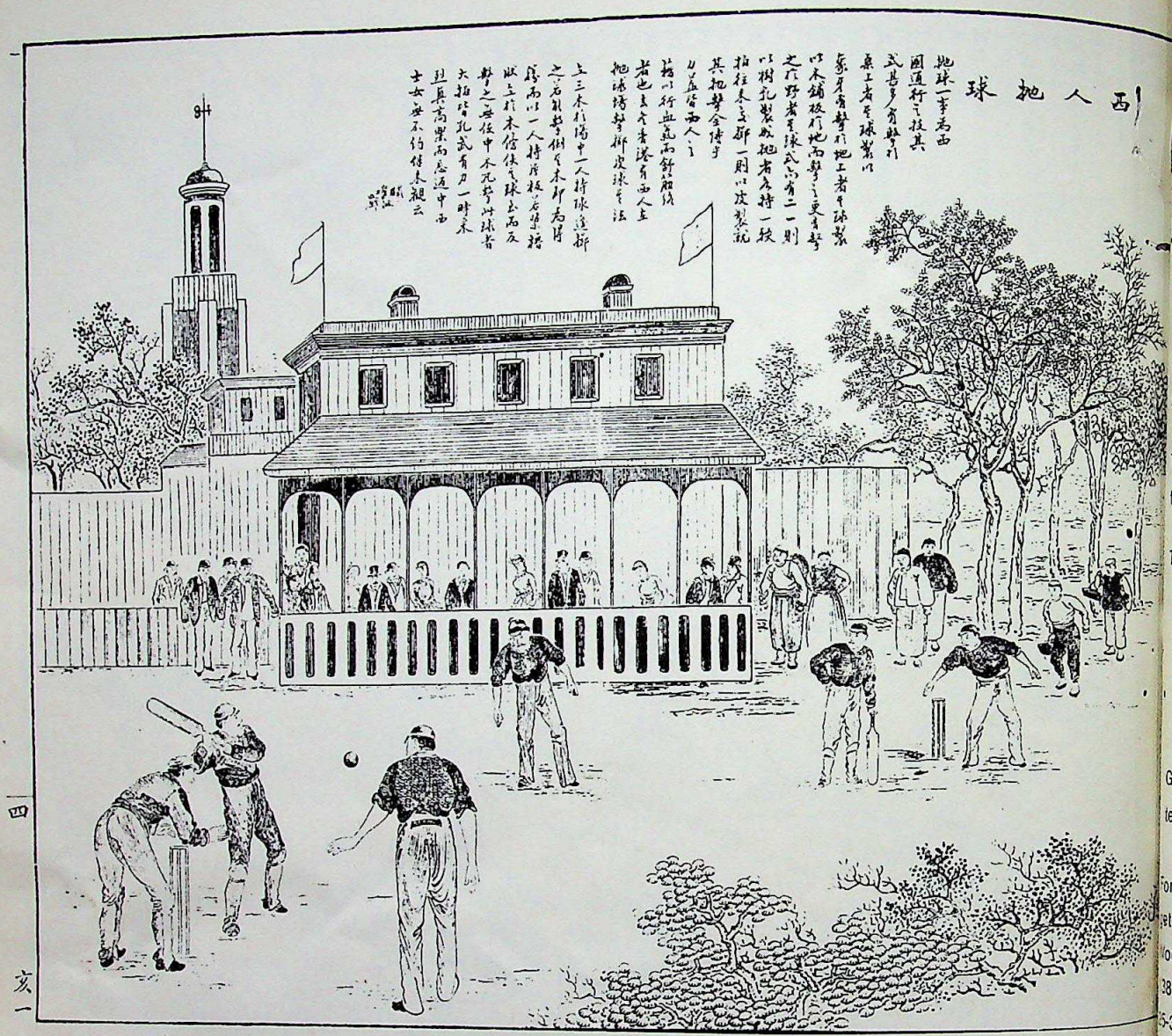

performance before a group of her friends and left with a sum of money which meant that the widow could send her husband's body home — something of the greatest importance to a Chinese.

Another foreign peculiarity was the game of cricket, again a British export, but this time played in Shanghai itself: 'Last winter, the Europeans played all kinds of ball games on the sports field. One of the games had three stakes stuck into the ground. One player threw the ball towards the stakes. When the sticks fell, he was the winner. Another player had a bat in the shape of a ship's rudder and stood near the stakes. When the ball came towards him, he hit it back to stop the ball striking the stakes. The "keepers" were the strongest men in the team and they enjoyed the game so much that they forget to go home. Not only Europeans went to watch, but Chinese men and women, too.'

The non-player will understand little more about the game than before, and wonder more than they did about the interest it generates, but our small selection from the fifty-two illustrations in the *Atlantis* book taken from more than four thousand published during fourteen ye that *The Illustrated Shanghai News* existed give a g idea of the delicacy of the painters' brushwork, and quality of the artisanship of the men at the stone *The Lithographic Studio.*

It is a new angle on *Chinoiserie* to see a British clim struggling with an eagle on a mountain face with Chine style trees sprouting all around him and a prim-mouth Queen Victoria being advised by her Prime Minis Lord Salisbury, against a background of a Chinese scre and flowers in Chinese porcelain vases, with bronze u as additional decoration.

The Editor explains in his introduction that a com set of the *News* is very rare: even the fabled B Museum has an incomplete set. That's another r why the publication of this book is to be welcomed

—GEORGE

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HEMISPHERE

AN ASIAN-AUSTRALIAN MAGAZINE

VOL. 23 NO. 2

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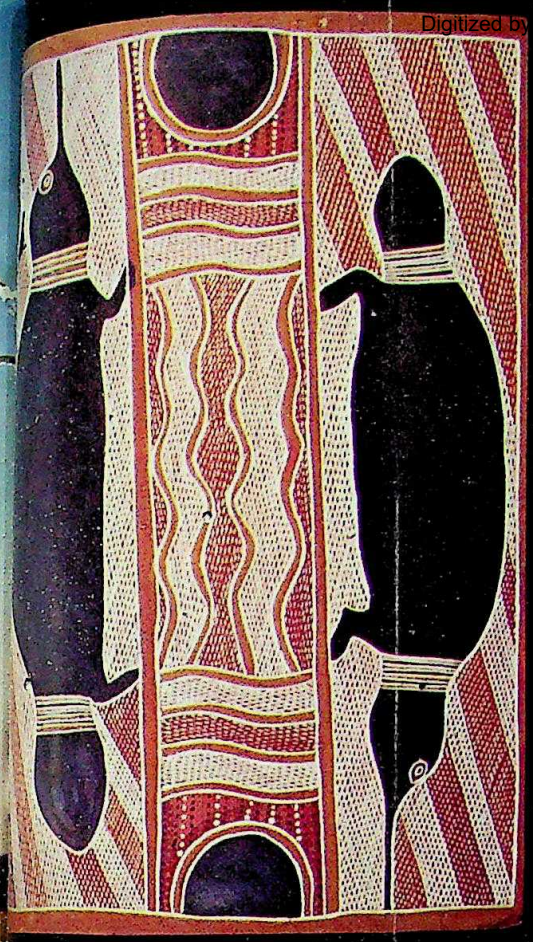

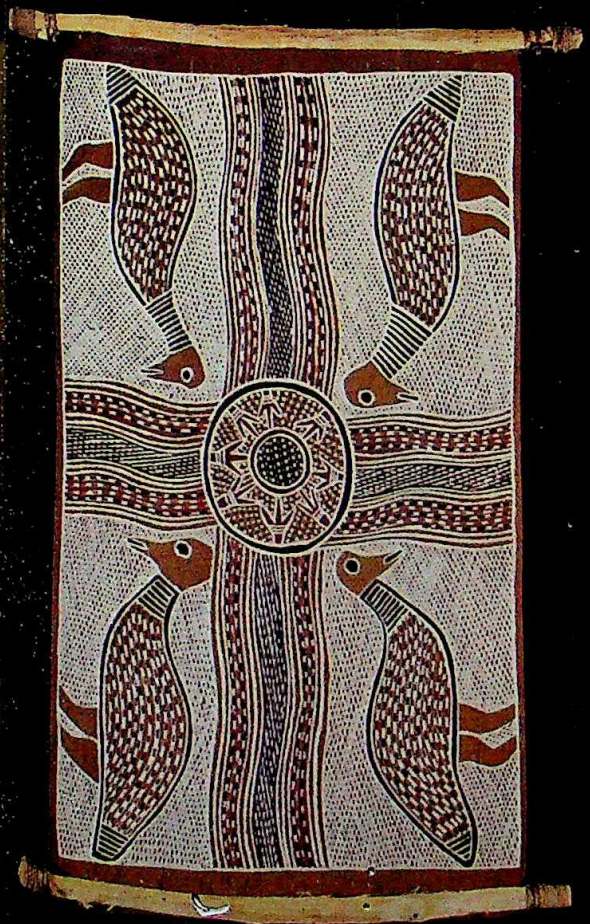

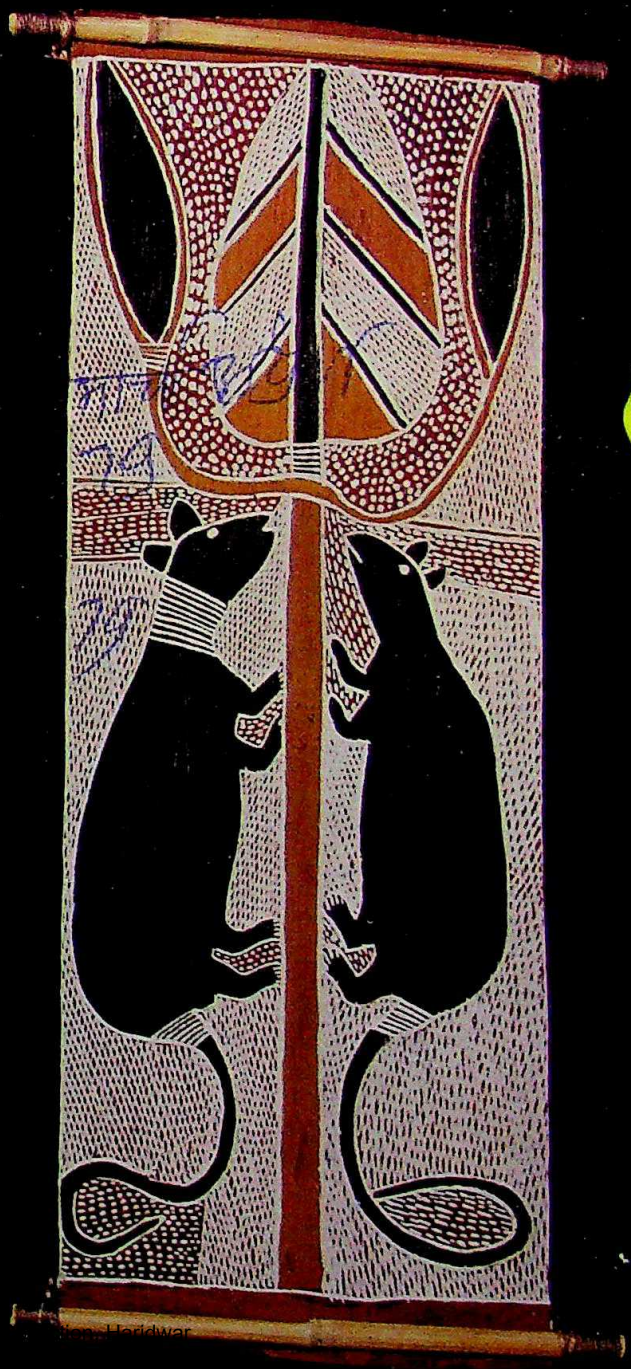

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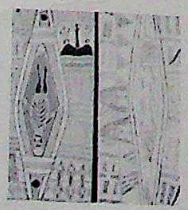

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AT ISSN 0018-0300

Editor: KENNETH RUSSELL HENDERSON
Assistant: D. S. ABEYAGUNAWARDENA

EDITORIAL

OUR next issue is being given over to the Indian Ocean; this is in conjunction with the International Conference on Indian Ocean Studies to be held in Perth, capital of Western Australia, from 15-22 August this year. The University of Western Australia, where the conference is to take place, is only fifteen kilometres from the Indian Ocean.

Contributors to this special issue of *Hemisphere* include Professor C. R. Boxer (The East Indiamen), Dr. Dorota Starzecka of the Museum of Mankind in London (a rarely-aired aspect of Captain Cook), Dr. Ken MacPherson (Arab traders), Dr. Frank Broeze (the coming of steam), Professor S. Arasaratnam (trade and traffic before the Europeans), Otto Dahl (Madagascar, home of early Indonesian migrants), David Lewis (traditional craft of the Indian Ocean), Deryck Scarr (the Seychelles), and a colour spread by photographer Richard Woldendorp of Australia's Indian Ocean littoral.

The three paintings on the cover are by a painter from Arnhem Land in the northern part of Australia. Banapana and his father Narratjin were offered a Creative Arts Fellowship by the Australian National University. (See page 120).

Top left: The Echidnas, *which shows two ant-eaters on either side of a hollow log coffin, represented by the central cylindrical figure. Bottom left:* Bird on the Beach. *A sea bird searches for food among the debris of meals left behind in the sand. In the centre is a water hole with the bird's footprints surrounding it. Right:* Possums Climbing. *The possums are climbing the wild plum tree, spinning their fur into lengths of string. The dots are the scratches made by their claws. (See page 127).*

OPPOSITE: *Mrs. Irene Truscott teaching a hearing-impaired Sabina Bratima (5) to speak. (See article beginning on page 106).*

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'BEAUTY

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AST CHANGE'

ater-colours by

ustralian War Artists 1914-18

Jean Campbell

'There is nothing that obeys the artist's hand so exquisitely; nothing that records the subtlest pleasures of sight so ectly. All the splendours of the prism and jewel are vulgar and few compared to the subdued blending of the e opalescence in finely-inlaid watercolour; and the repose of light obtainable by its transparent tints, and olutely right forms to be rendered by practised use of its opaque ones, are beyond rivalship, even by the most l methods in other media.' — John Ruskin, 1886.

ATER-COLOUR is a very old medium. It has its own hetic, its own delights, born of the distinctive quality ranslucent colour wash on paper. It has flowered at us times, in various places around the world — in a, in Persia, in mediaeval France, in post-Renaissance pe with Dürer, Rembrandt, Van Dyck, Claude, down ézanne and masters of the contemporary movement.

e of the finest flowerings of water-colour occurred ngland where from the seventeenth and eighteenth uries a specific tradition of water-colour painting oped, engaging artists of the stature of Sandby, ns, Cox, Cotman, de Wint, Girtin, Rowlandson, Blake the incomparable Turner.

is British tradition, a high regard and understanding e intrinsic quality of the medium, accompanied the explorers and pioneers to Australia. It is chiefly on water-colourists, such men as Lycett, Wainewright, Prout, Glover, Oswald Brierly, George French Angas, Gill, Conrad Martens, and many lesser practitioners, s, soldiers, convicts, travellers, free settlers, we nd for early records of our country and its people, for the foundation of our art.

m 1777 to the present the contribution of the water-ists has been considerable, but except in historical ctions it is given scant recognition. At most times tate galleries of Australia, although they possess numbers of water-colours, exhibit only a handful, sometimes not even that; in our art histories and in major exhibitions at home and abroad they find small place.

It is a surprising fact — and one of which many people interested in art are not aware — that the most extensive and constantly available display of twentieth century Australian water-colour painting is to be seen at the War Memorial in Canberra. Though gathered together as coverage of Australia's participation in war, the collection is remarkable for its wide range of subject matter and for its aesthetic quality, bringing together as it does many examples from the hands of some of our most distinguished painters. Some, to be sure, are concealed among the accoutrements of war, but in recent years there has been a marked upgrading in display and there are many well-lit panels of water-colours that are a sheer delight; an historical record primarily, but art transcends war.

In 1914, when the first world war broke out, many Australian artists were working in England and Europe. The depression of the 1890s had seen a great exodus; the established Australian artists found it more possible to earn a livelihood by working abroad, and of course found the artistic climate much more congenial and stimulating; younger ones, if they could manage to raise the money, took off for further study and the wealth of experience only to be found there.

Roberts, Streeton, Fullwood, Longstaff, Quinn, George Coates and his wife (Dora Meeson), Lambert, Dyson, Leist, Septimus Power, Blamire Young, Margaret Preston and Bessie Davidson were among the many Australian

: Ditched, *by Fred Leist, 1917.*

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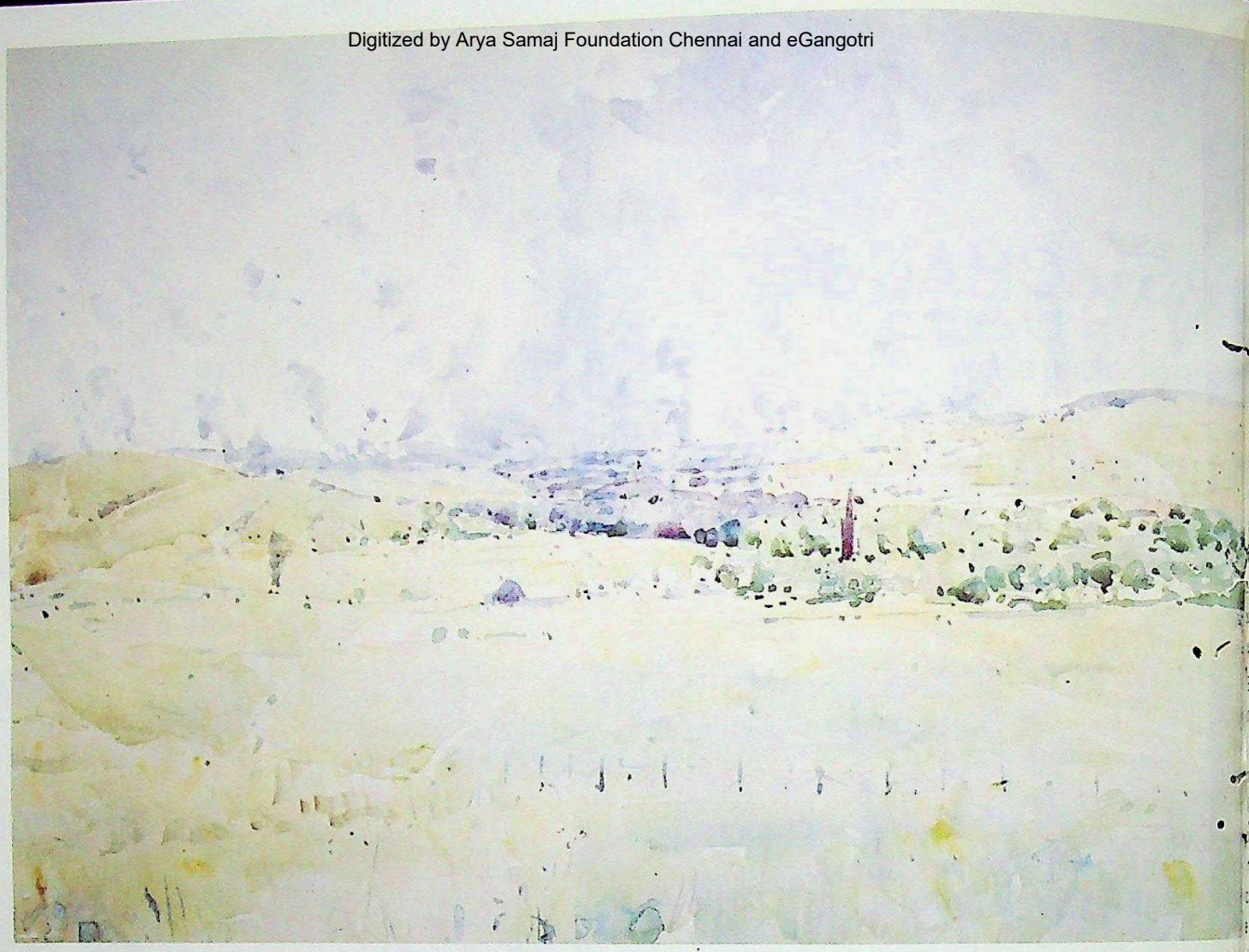

Bombardment near Albert, *Louis McCubbin, 1918;* Battlefield at Ypres, *Fred Leist.*

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sts in England and France at the time who became ged in one way or another in the war effort. Some of were over age but volunteered for service in the tralian Medical Corps, working at Wandsworth in the Australian General Hospital; George Coates and Roberts continued as hospital orderlies throughout war; Bessie Davidson served in a French hospital; garet Preston taught craft as a rehabilitating activity the wounded. Blamire Young, one of our most dis-uished watercolourists, among his many attainments, a crack shot and spent the war on the Salisbury in as gunnery instructor to the Australian Divisions.

General Gellibrand and the war historian, Captain rles Bean, who himself made some sketches at the danelles and was editor of 'The Anzac Book' to which y artists and writers contributed, were chiefly re-nsible for the Australian Government's decision to oint official war artists.

Ballarat-born Will Dyson, who had already made a e for himself as a cartoonist in London, was the first e appointees. He went to France in 1916, was twice nded in the course of his work; Daryl Lindsay, de-d to 'offside' Dyson, records in *The Leafy Tree,* his y of his illustrious family: 'Dyson hated the war with esentful bitterness and his feeling about it — the rifice of youth, the misery and depression of it all — splendidly recorded in the series of drawings now e Australian War Memorial at Canberra'. Daryl (later Daryl and director of the Victorian National Gallery), king alongside Dyson, his brother-in-law, was per-ded to fill sketchbooks with drawings of Diggers, as Australian soldiers were affectionately known, and Front, and some of his tentative efforts, the beginning s artistic career, are in the Commonwealth Collection. as not until later, when engaged in surgical drawings Sidcup Hospital in Kent, that Daryl determined to ow his brothers, Percy, Lionel and Norman, and devote life to art. Under the influence of Henry Tonks and on Steer, he became possibly the most distinguished er-colourist of them all, the first Australian to be ted to the Royal Society of Painters and Water ours, London.

In 1917 Arthur Streeton, A. H. Fullwood, Septimus er, Fred Leist and George Bell were also sent to ce to cover the action. Quinn, Longstaff and George es were engaged in official portraiture. George bert was sent to join the Light Horse in the Middle . The great volume of Lambert's work, which in-es some dashing water-colours, oils and a magnificent es of drawings—forms a major part of his total work.

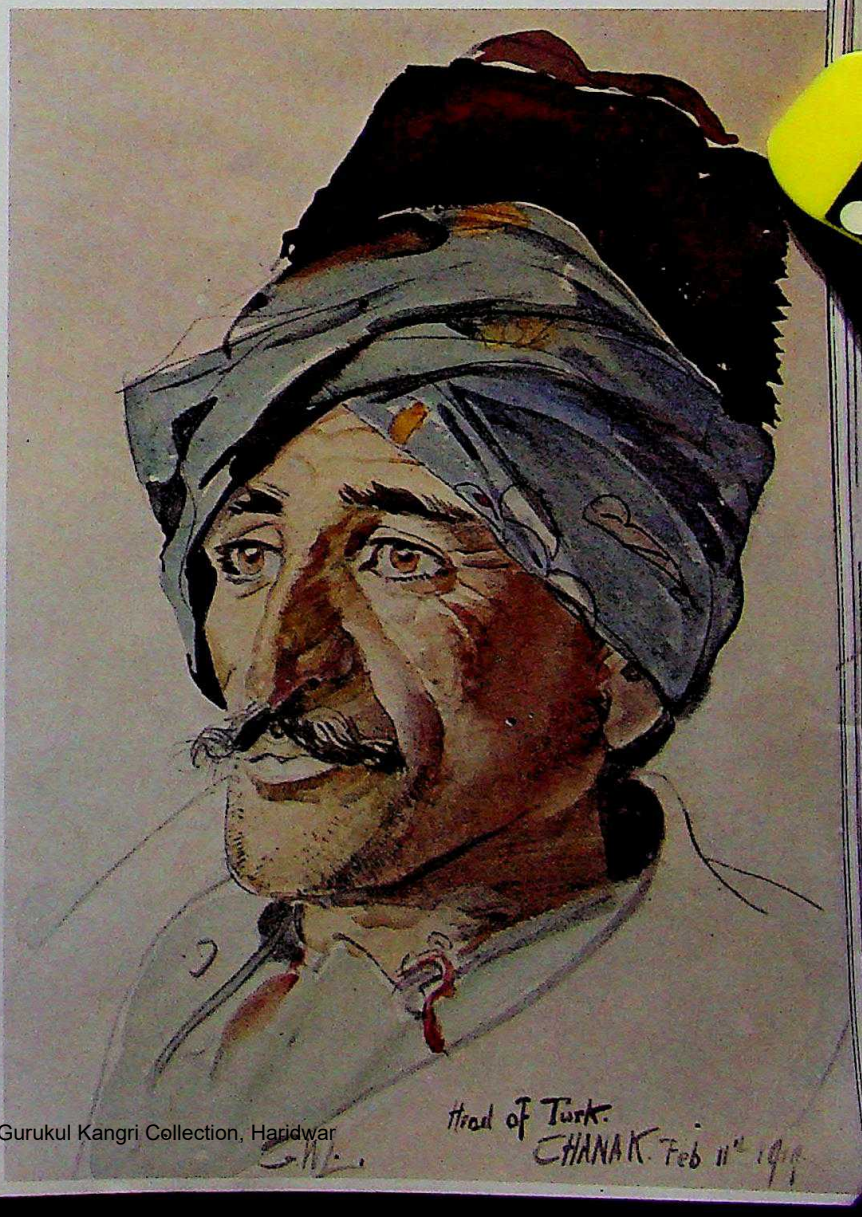
Many of those commissioned as war artists were not fically water-colourists, but as in the periods of ration and settlement in Australia, the exigencies of ng in the field induced them to rely more on the um. Its speed of drying, ease of carrying, adapt-y to the immediate sketch as a record, for develop-further as time and conditions allowed, or for the more finished depiction of quickly changing scenes and events, made it a much-used medium.

This primary purpose of making a record could have resulted in dull, pedestrian work, but these were all experienced artists and the challenge of war conditions, the confrontation with stirring subject matter quite alien to their normal environment or choice, and the stimulation of deep national and personal involvement drew from many some of their best work in watercolour.

There are fifty-six water-colours by Streeton, most of them of war-torn France, in the War Memorial, and nowhere is there such a concentrated and impressive display of his swift washes and assured notation, despite the fact that he is more generally admired as a water-colourist for his lyrical landscapes, especially of Venice. Streeton's virtuosity as a technician is remarkable whatever the medium; the war sketches combine penetrative simplification of forms—figures, tanks, planes, buildings, incidents:—all incorporated in a firm grasp of the whole pictorial impact—with lucid washes, airy clarity, subtle blending of colour.

Similarly the vigour and strength of Septimus Power, who, in war as in peace, was often absorbed in subjects with horses in action, are seen at their best in his war

Head of a Turk, *George Lambert, 1919.*



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Billet at Méricourt, *Arthur Streeton, 1918.*

Le Cateau, *George Bell, 1918;* Cloth Hall and Menin Gate, Ypres, *Henry Fullwood, 1919.*

water-colours; the firm, crisp washes of Fred Leist and the quiet, tonal impressionism of Henry Fullwood in sympathetic response to landscape, are seen each in his own individuality. Fullwood, frequently using charcoal to strengthen his wash, made expressive statements of tragic destruction that go beyond the gentle, descriptive appreciation of nature and the picturesque of his peacetime work.

The visual, physical, emotional experiences which inspired the creative vitality of much of the war work done in the field are related by George Lambert, when he served with the Australian Imperial Force in Palestine: 'the heat there was a supreme test even for Australians the valley is a sulphurous region below the level of the sea. The season was well advanced, and while the scen was very beautiful the heat was most trying. At Auja and Ghoraniyi crossings, spots that only one short work could describe for heat, flies and hard work — I saw subject crowd on subject — patrols, packhorses with ammunition and naked light horsemen swimming horses across the river; a feast of movement, a feast of colour, and the background the most refined imaginable. But the heat indescribable — unendurable. Even if I had been inclined to slack myself, the example of men who never tired forced me to be up early and paint and draw all day' (William Moore, Vol. II, p. 62).

Earlier and unofficially many combatant artists with the Australian Imperial Forces were making their own records Bombardier George Benson, who had trained at the National Gallery School in Melbourne, was early employed at the Dardanelles making drawings of the coast prior to the landing; he made panoramic drawings and sketches of the beaches before being wounded in action After the war Benson settled in Perth where he taught and became widely known as a water-colourist for his broadly handled still-life and landscape paintings.

Also at Gallipoli was the New Zealand-born Horace Moore-Jones. He was a Sydney resident, a council member ber of the Royal Art Society of N.S.W., and served with the Australian forces. He made a sensitive series of small directly observed water-colours of the cliffs, camp sites and activities at Gallipoli that have an almost primitive appeal. T. H. Ivers, who had studied under the Sydney teacher, Julian Ashton, was employed to prepare contour maps of the ground occupied by the Australian Light Horse in the Middle East. He also made a series of small water-colours, objective transcripts of the area, which compared to the professional bravura of his friend George Lambert, seem very tentative in handling; yet by their deep sincerity they convey an uncanny reality of time and place, colour and character of the terrain.

Among the combatant artists with the War Record Section—who were quite distinct from the Official W Artists—were Frank Crozier, first of them, given permi sion at Pozières by General Gellibrand to sketch as h pleased, Louis McCubbin, who made some subtle lan scape water-colours and later completed a twenty-tw foot 'Somme Valley' for the War Memorial, J. F. Sco

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Advancing across Ypres Battlefield, *Septimus Power, 1917.*

S. MacDonald, who was severely wounded, and Will staff who painted the haunting 'Menin Gate' war elery scene, a cousin of the more famous portraitist, John Longstaff. Most of these artists were later con- with commissions for large pictures and models attlefields for the Memorial Collection, but almost all duced more distinctive work in the small, immediate or drawings done on the spot. It is also an esting fact that from the ranks of these recording s came the future directors of Australia's three National collections; James MacDonald, also n as a conservative writer on art, became con- tively director of the Art Gallery of N.S.W. and the nal Gallery of Victoria; Louis McCubbin moulded evelopment of the Art Gallery of South Australia for een years; and Daryl Lindsay, who, succeeding onald in Melbourne, instituted a more lively, tolerant enterprising regime at the National Gallery of ria.

rvyn Napier Waller as war artist, and indeed ghout his long life, occupies a place apart. He was ibed by J. S. MacDonald in 1933 as 'about our only d decorator'; his many monumental works—murals, s, stained glass windows — chiefly in and around urne, where he was born, trained and lived most of his life — are lasting evidence of his skill and power as a designer and decorator. As a war artist he is chiefly known for the mosaics in the Hall of Memory and the stained glass windows at the Australian War Memorial in Canberra and the various other war memorial windows in schools and churches. Serving at the front in France in 1917 he lost his right arm and during convalescence taught himself to paint with the left, in 1918 holding a very successful exhibition in Melbourne of war sketches in black and white, in water-colour and oil. His sketches as seen in the War Memorial are remarkable for the placing of figures, always well-balanced, expressive, dramatic.

In the 'twenties his rich and formally designed large water-colours became notable features in Society exhibitions, water-colours, like his murals, often based on literary legends and allegories and in style owing much to the great illustrator-decorators Blake and William Morris.

The author, widow of the former director of the Art Gallery of South Australia is herself an expert on Australian painting. Her article on the artists of the second world war will be published by Hemisphere *shortly. Her book on the War Memorial Collection is presently in the press.*

Title: *'All things counter, original, spare, strange . . .*
He fathers-forth whose beauty is past change.'
(Gerard Manley Hopkins)

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A PUPPET IN THE HAND . . .

Photographs by Bill Payne

MOST people like miniatures, perhaps because they are easier to manage than the full-size objects.

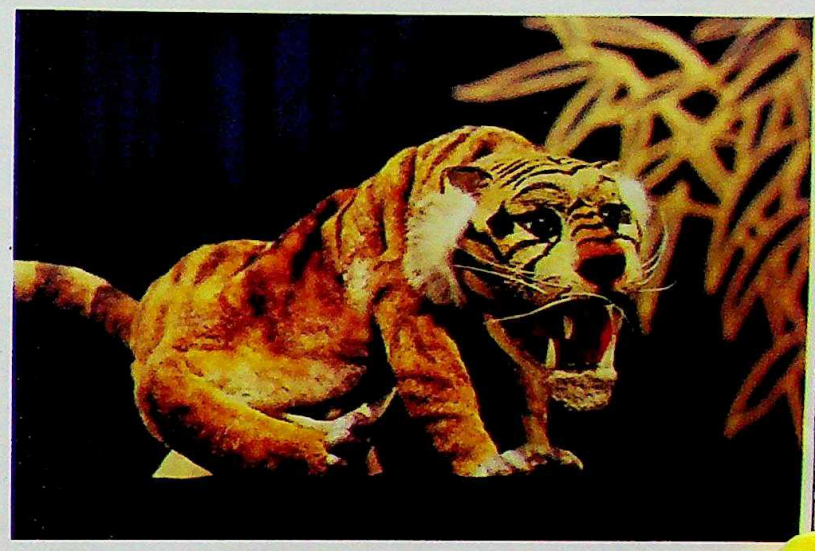
In Asian countries particularly, puppetry has been brought to the standard of an independent art form, while in Europe many countries now rely on the ageless household comedy of Punch and Judy. This is perhaps because, for a couple of centuries, transport in Europe has offered less of a problem than it has in Asia, so that the puppeteer, able to pack up his actors and props and more or less put them under his arm for transport to the next village, was a more economic proposition than a troupe of live actors. Another reason was probably that in Asia theatre and dance remained under aristocratic patronage for much longer than they did in Europe, where the theatre early became a paying proposition.

In the last few years, interest in puppets has grown in Australia: in fact, nearly a quarter of a century ago, Peter Scriven created the brilliant *Tintookies,* which achieved world fame and made many tours to Asia; now, Australia even has a Marionette Theatre as part of the Elizabethan Theatre Trust. This makes frequent tours to Asia, and in return, over the past few years Australian audiences have enjoyed the beauty of the Japanese *Bunraku*—child-sized puppets whose manipulators, dressed in black and wearing cowls, soon become invisible as one watches the action of the ancient dramas played out by the small figures.

This year, Australians have now seen puppets on a much smaller scale from one of the world's most famous troupes: from Fujien (Fukien), in China. These are glove puppets, perfectly designed and perfectly dressed, with movements as graceful and lively as those of the actors and actresses in the Peking Operas. So perfect are the performances on the tiny 'stage', hardly bigger than a suitcase, that even adults begin to take sides in the dramas played out by the tiny figures.

The plays are, if you like, a little over-dramatised, but they were meant to appeal to a wide audience, and have done so for many years; their tour of Australia soon made converts, as earlier tours had done in a half a dozen other lands.

One of the traditional plays is *The Ta Ming Prefecture,* in which farmer rebels in the Song (Sung) Dynasty enter a town disguised as acrobats and musicians, make fools of the stupid officer guarding the gate and his bailiff in order to save the life of an honest citizen (pages 74-75). Wicked innkeepers seem to feature a good deal in the traditional dramas of the Fukien troupe. An honest man is selling his horse, Snow-White, to pay his debt at an



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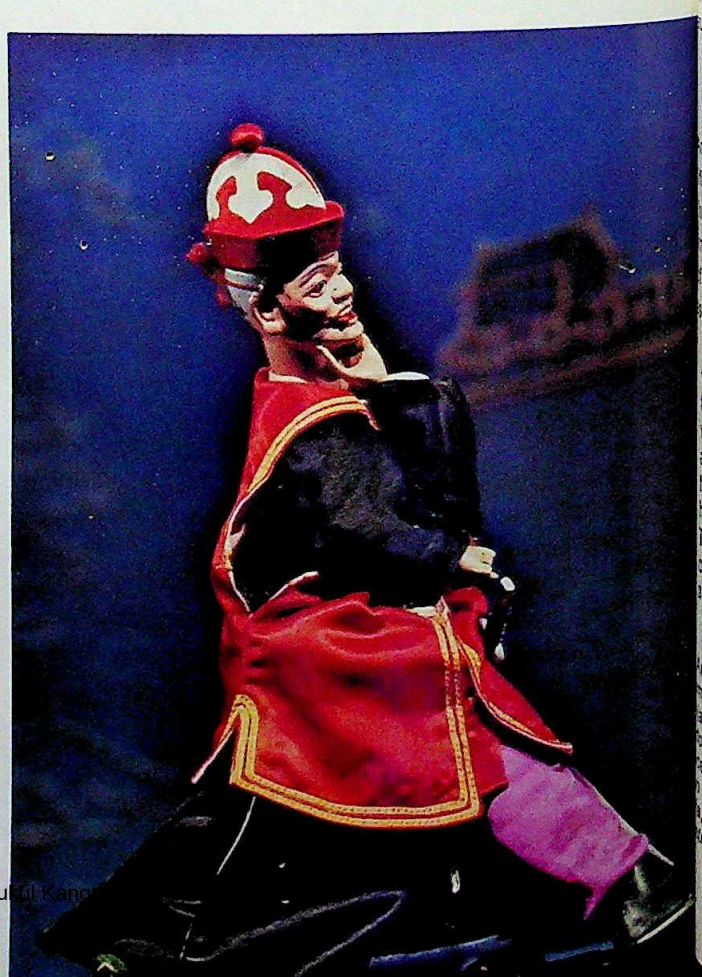

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on; in *The Fight with the Tiger,* a young scholar Zhong Kingqi (Chung Ching-chi), P. 72, on his way to the imperial examinations gets into the clutches of an innkeeper with murderous intent, flees, with the landlord after him, only to come face to face with a tiger. However, he is saved (pp. 72-74) by a fearless hunter (Lei Wanchun) who lived at the foot of a mountain in the area in the province of Sichuan (Szechuan). Lei does away with both landlord and tiger, and scholar and pageboy are both saved. The story is set in the Tang Dynasty.

It is interesting that the programs for the Fukien troupe list the names of the puppeteers whose hands are responsible for the small miracles on stage. As Bil Baird, author of *The Art of the Puppet* (Ridge Press) says:

> . . . the finished product refers back to its originator, for the marionette takes possession of its leader. Product and producer cannot be separated.

And yet, realistic though the dramas may be, however lifelike the figures, audiences know they are not watching the theatre, just as children playing 'mothers and fathers' know perfectly well that the doll with 'Germany'—its place of manufacture—on its stomach is not a real baby. And Bil Baird goes on:

> Whatever the end result, puppets are not little men, women, or animals. A puppet must always be more than his live counterpart — simpler, sadder, more wicked, more supple. The puppet is an essence and an emphasis. For only in this way does a puppet begin to reflect the truth. When puppeteers try to copy the human animal, they fail. Live actors do it much better. The mechanical copy of life may be amazing, curious, or even frightening, but it doesn't live, whereas the suggestion contained in a puppet may be full of life.

DAVID INGRAM

Articles on puppetry and shadow plays have appeared in Hemisphere as follows: *Puppet theatre in Japan,* April 1974; *Kasthani puppets,* June 1974; *Modernisation of* wayang, Indonesia, November 1975; *Peter Scriven and the Tintookies,* December 1975; *Puppet theatre in Asia and Europe,* May 1976; *Krabok, Thailand,* September 1976; *Shadow show in Asia, Australia and Europe,* June 1978; *Bradshaw's puppets,* Australia, December 1978.

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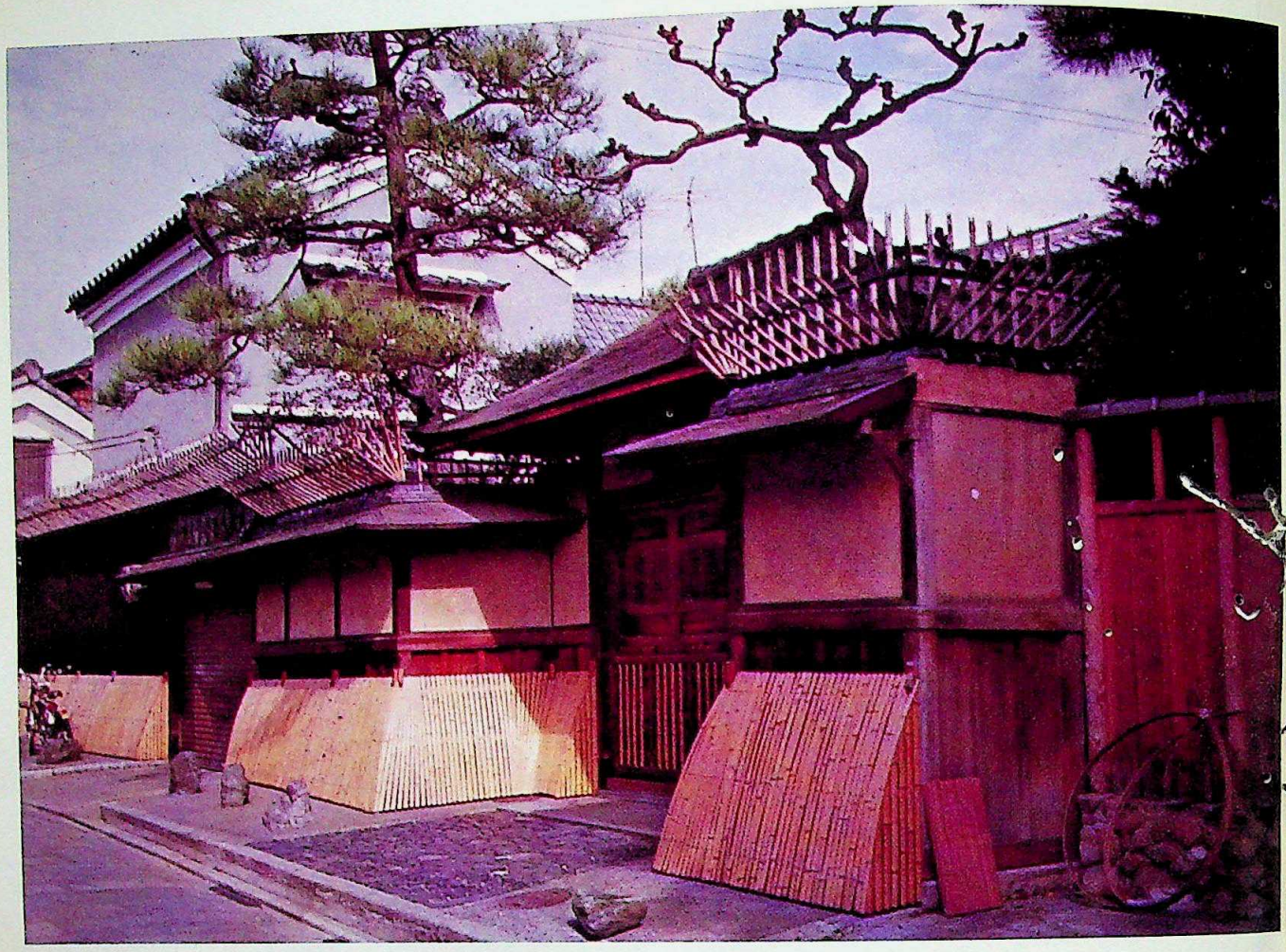

Old houses and stores beside the Kiyomizudera

A WALK IN KYOTO

PART II

Harold Stewart

Photographs: Gwen and Jim Smith

FROM Teapot Lane to Yasaka Shrine: The narrow winding street directly in front of Kiyomizudera's gate is popularly known among foreigners as 'Teapot Lane' for reasons which will soon reveal themselves. But in fact it is the continuation of Kiyomizu-michi. On both sides it is lined with fascinating little shops selling *miyagemono* or souvenirs for tourists who wish to take home some product of this district, from pottery to pickles. Here, for instance, you will find the original shop which according to the sign on its *noren* first made that typical Kyoto delicacy, *yatsuhashi* biscuits. Yatsuhashi means 'eight bridges' and the biscuit received this name because its cinnamon-flavoured strips of rice-dough, when cooked on a hot-plate under blocks of wood and then curved in a corrugated iron mould, resemble the eight plank bridges over the iris pond immortalised in Zeami's Noh play *Kakitsubata.* But they can also be eaten raw and are then called *nama-yatsuhashi:* squares of rice-dough, with a dab of sweet bean-paste in the middle, folded over diagonally.

Here, too, you will discover some of the largest and best shops selling *kiyomizuyaki* by both commercial and studio potters. Also on the south side of the street are

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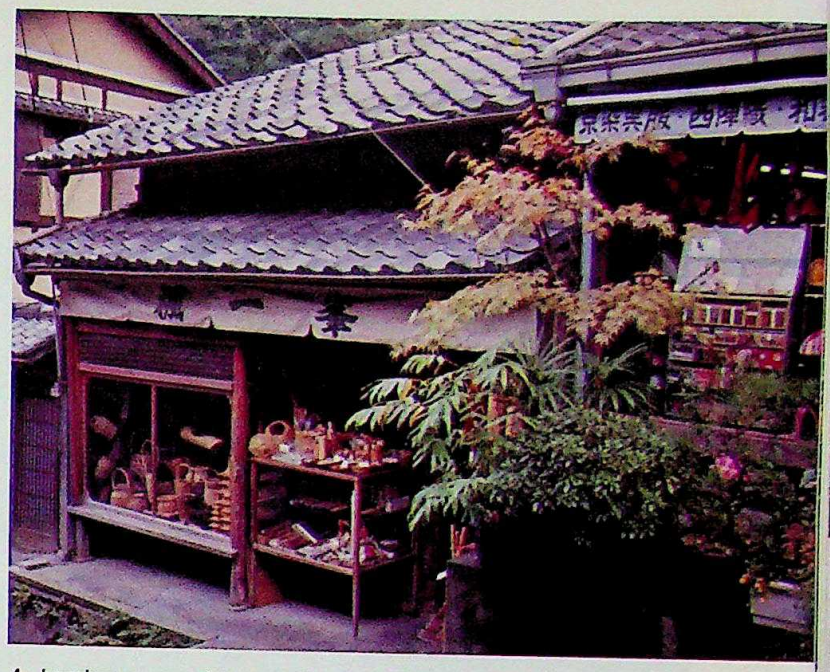
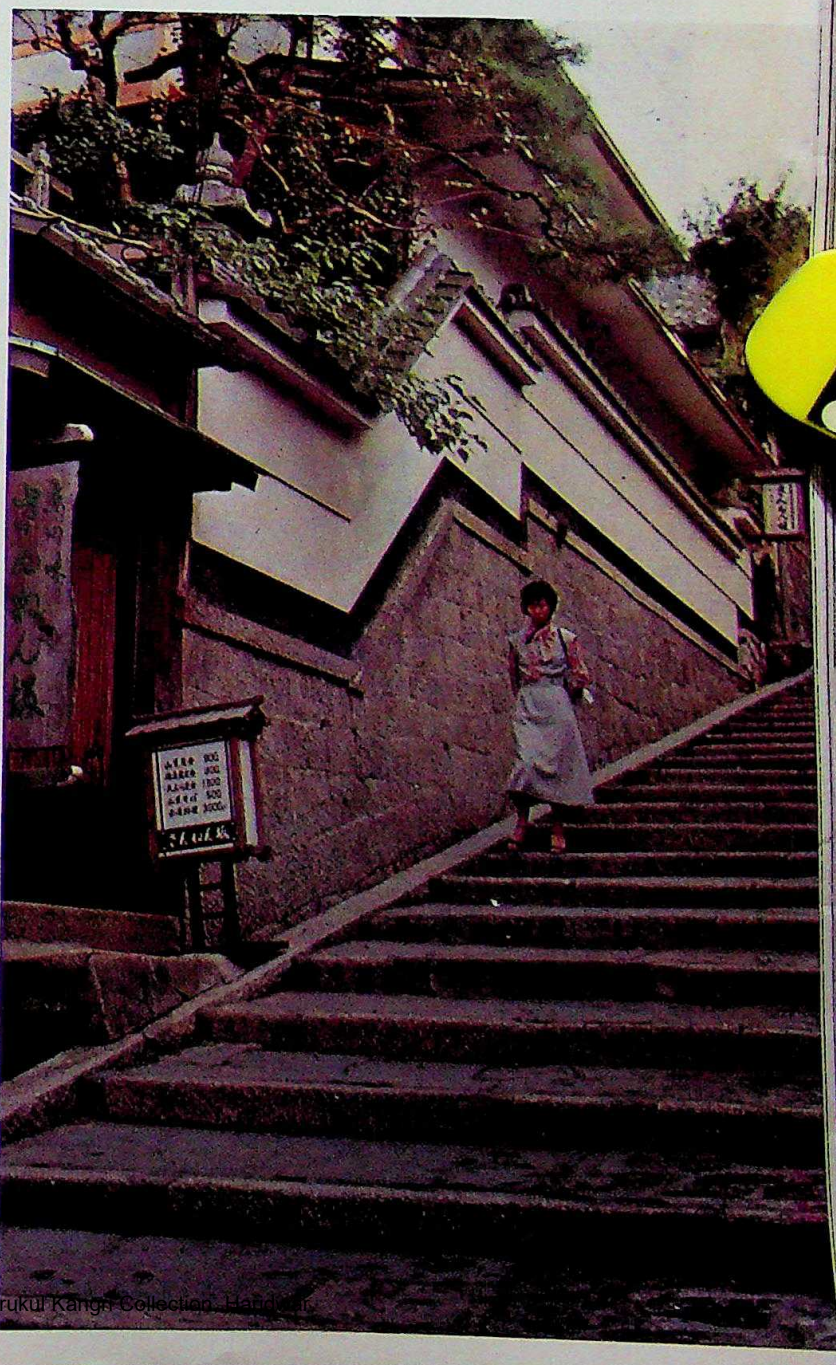
wo shops stocking Buddhist religious artefacts, as well s semi-precious stones, bronze castings, and tiny bridges, rii or Shinto gates, lanterns and animals and birds for se in the art of *bonkei* or miniature gardens. In winter, t chestnuts are roasted and sold along this lane.

On the north side of the street you will find three of iyomizu's sub-temples. The first is called *Hōtokuji* and ands at a bend in the lane opposite a fine private house arded by two Chinese stone lions: if the gate happens be open, you can catch a glimpse of its attractive ntrance and garden. The middle sub-temple, *Shimpukuji,* the most interesting of the three. You will be amused find an old cobbler at work mending shoes under the aves, and the priest's car parked in the front porch, nce a Shinto-style picture-gallery. But look into the rior, for it contains not only standing statues of the leven-Headed Kannon and Fudō Myōō, but seated on e altar is an imposingly large image of Dainichi Nyorai e Great Sun Buddha) which is designated an Important ltural Asset. A little further down on the left, a master the art gives tuition in *Bonseki-kei,* usually displays example of his artistry in a pottery-shop-window. This a landscape sketched in white sand on a black lacquer ard or tray using only a feather and perhaps a pebble two.

This will bring you to the third of the sub-temples on e right, called in undecipherable calligraphy framed ove its front door, *Kyōkakudō.* This stands on the rner of Teapot Lane and *Sannenzaka* or Third Year pes, whose stone stairs descend at the side of the b-temple. On the adjacent corner you might be erested to look into a shop selling spices such as *ichimi* which is a savoury condiment compounded of ven different spices and used to flavour Japanese shes. Inside you can watch a potter at work skilfully owing the little pots and jars which, after glazing and ng, will hold the spices and pickles which can be ght here. On his drying-shelves stand row upon row pots of identical form or in graduated sizes, all hand-own but more perfect than any machine-made product. old stone sign-post marks this point where Teapot e meets Kiyomizumichi and the steps of Sannenzaka. w as you begin to descend the stairs between the ce-shop and the sub-temple, you can enjoy a narrow a of the wooded Higashiyama or Eastern mountains aching northward. Behind those castle-like walls on r right is concealed a pleasant Japanese inn and aurant. Tiered down the other side of the stairs are uresque old tea-houses and shops like the *Moku-ga-ya,* which sells original woodblock-prints and cards; *Otsu-e* or folk-art pictures from Otsu on the es of Lake Biwa; and the 'Ten Ox-Herding Pictures' Zen fame. Lower still, a doll-shop is filled with varn-d gourds of all sizes, once used by pilgrims for ing water or *sake,* or as nests for pet sparrows. osite these are a shop that offers a bewildering ty of articles made from bamboo, beside another



A bamboo-ware shop on Sannenzaka *steps; a view looking up* Sannenzaka *steps, showing the castle-like side wall of* Sannenzaka *Restaurant.*



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The garden of Sakaguchi's Ryōri-ryōkan, *'a celebrated restaurant and inn'.*

selling *Nishijin* textiles. At the foot of the stairs, observe carefully a perfect example of the traditional-style Kyoto dwelling-house, for they are becoming rarer, being demolished daily to make room for ferro-concrete crudities, so that by the end of this century the only examples left may be in museums.

As you stroll along the dip at the foot of the stairs, you will notice an old-style biscuit-shop stocking *arare* or 'hailstones', so named because of their size and hardness. They are rice-crackers glazed with *shōyu* or soya-sauce and flavoured with *nori* or seaweed. Each variety has a different shape or size, and is kept free from dust in its own glass-lidded box, but all taste much the same.

The cobbled lane from Sannenzaka now ascends a slight rise, up which you will come to *Ryōri-ryōkan,* or restaurant and inn on the opposite side of the street. This fine mansion was originally the *Ryōjūsensō,* an aristocratic villa, and looking in through its gate you can still catch a tantalising glimpse of its beautiful early Ēdo Period garden, tiered up the hillside behind. Today it can be hired for wedding-receptions and tea-ceremony parties, held in the *chashitsu* in its garden.

Now turn around, and you will be facing one of Kyoto's many counterparts of the 'Old Curiosity Shop', filled from floor to ceiling, inside and out, with antiques, both old and new. There are three other antique shops in this stretch of the lane. Take special notice of the handsome gates and *kuràs* of the old houses opposite.

At this point you will notice at the corner an old stone sign-post, which you can use as a marker if you decide to take a detour. Continuing on the same lane downhill you will soon notice the roofs of a pagoda rising on your right. On reaching the first cross street, turn right and you will be standing in front of the five-storeyed *Yasaka Pagoda.* This is one of the landmarks of Kyoto, for it stands 128 feet high, and being on the side of Higashiyama, the topmost of its five roofs can be seen from many points in the city. It was built in 1440 by the Ashikaga Shōgun, Yoshinori, and repaired in 1618 by Itaka Katsuhige, who was then governor of Kyoto. It does not, as its name would suggest, belong to the Yasaka Shrine, but to the Hōkanji Temple. At the right-hand end of this street in front of the pagoda, you will come to a minor temple, called *Koshindō,* popular with tourists for its statues of the Three Wise Monkeys usually displayed

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e entrance of the small main hall. (Their originals at Nikko's Tōshōgu Shrine in a carving above the le for the sacred horse). Now return the way you e, walking uphill until you reach again the old stone post which marks the beginning of this detour.

u will now be standing at the post which indicates point at which the cobbled lane from Sannenzaka nes the Ninenzaka steps. *Ninenzaka* means Second Slope, and like the Sannenzaka or Third Year Slope called after the year in which its steps were first in *Daidō,* 2 and 3 (807, 808). As you descend these s, on your left is a delightful old Chaya or tea-house door to a large shop selling bamboo; while a little er down you cannot but be fascinated by another Curiosity Shop filled with a multitude of antiques and s. Several more shops here specialise in *Take-Kogei* bjects of use and beauty made from that most ile of the grass family, bamboo.

is brings us to *Gokokujinja-michi,* a cross street h ascends from Higashiōji-dori to meet the lane Ninenzaka at right angles.

rn right here and proceed uphill under the large e *torii* or Shinto gateway guarded by two stone a-*inu* or Korean Dogs, which are the Shinto counter- of the Buddhist *Kara-shishi* or Chinese Lions. st at once, on looking north-eastward, you can ern the head of a huge statue protruding from among ree-tops on the hillside: we shall contemplate this at e quarters a little later. Continue straight on uphill, soon you will arrive at the *Gokoku-jinja.* This is a o shrine attached to the cemetery where the troops fought on the imperial side and fell in the War of oration of the Monarchy in 1868 are commemorated. de it to the south, a newly built museum, the *Ryōzen shikan,* preserves historical relics of that war to se the last Tokugawa Shōgun and to restore the eror Meiji to the throne.

ould that period in Japanese history be of no est to you, instead of climbing the hill, take either hort flight of steps or the path leading northward at arge torii, and a few yards further on you will arrive nt of the gate to the Ryōzen Kannon, a memorial later conflict. As you pass through the gate, you be struck by the size of the red paper lantern over- as well as by the pair of Niō or giant Guardian in their stalls on either side, where numerous straw als have been offered to them by pilgrims. But your ement will increase at the sight of the statue of on, Bodhisattva of Mercy, which now confronts you. is almost eighty feet high and is seated on the flat of the temple and mirrored in the reflecting pool in This colossus, whose head you glimpsed previously gh the trees, was modelled in concrete in 1955 in ry of all those who died in the second world war. e right of the temple there is also a small chapel Unknown Soldier of all nations. The gigantic statue has little aesthetic merit and is remarkable only for its size.

On skirting the ornamental pond, you will come to an immense incense-burner in the centre of the terrace before the temple. The wooded peak providing a background to the immense Kannon is known appropriately enough as *Ryōzen-yama* or the Mountain of Departed Spirits. In small shrines on either side of the main entrance are modern statues of no great merit: a tiny gold image representing Shakyamuni Buddha at birth; and two white marble statues, one seated figure, symbolising his Enlightenment, and one recumbent, for his entry into Nirvana at death. Inside the temple, the principal image is again the Juichimen Kannon or Eleven-Headed Bodhisattva of Mercy, with her twenty-eight attendants in a side chapel.

Next walk around the temple toward the left or northern end, where you will find a pleasant modern garden containing a great slab of granite. On this is incised an emblematic representation of the Buddha's footprints with their symbolical markings. Here a flight of metal steps will take you up into the back of the vast statue; for it is hollow, and inside you will find a dark chapel containing a circle of Buddhist statues. Most are new and of no great beauty, but are interesting because in front of each is affixed a zodiacal chart. By consulting this you can discover from your birth-year both your sign in the Japanese zodiac and your tutelary Buddha or Bodhisattva. Having circumambulated this chapel, you can then descend the metal stairs on the opposite or south side.

On re-emerging from the front gate, you will observe the entrance to another temple to the north. This is *Kōdaiji,* rarely open to the public, except by requesting permission in advance on a postcard addressed to the Abbot. *Kita-no-Mandokoro* or *Kōdai-in,* the widow of the famous general Toyotomi Hideyoshi, built this temple in his memory in 1606, and their mortuary chapel is lavishly decorated with *makie*: a richly decorated gold and black lacquer, to which this temple has given its name. Its landscape garden is by Kobori Enshū and its twin tea-houses, reached by a roofed corridor climbing up the hillside, are among its most noted features, along with such treasures as wall-paintings by the artists of the Kanō and Tosa Schools and the architecture of its Hondō and Gate.

You can descend again to Kōdaiji-michi either by the path in front of the temple, or by the flight of stairs in front of the Ryōzen Kannon, which alternatively offers a view of Kyoto city in the middle distance with the Western Hills or Nishiyama as background. But before you leave, look at the charming little pavilion at the head of the stairs, especially at its exquisite gilt bronze finial of a bird fluttering in a sunburst.

Instead of taking this detour, turn left into Gokokujinja-michi, walk downhill one short block, and then turn right

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into Kōdaiji-michi, which follows our main route. But before doing so, you might like to look at the wooden Front Gate to the Gokoku Shrine, and then beside it your attention will be attracted by the bright red Chinese-style entrance-gate to a celebrated Buddhist restaurant. Named after Ikkyu, that eccentric and non-conformist Zen Abbot of Daitokuji, it serves *Fucha-ryōri* or Zen cookery, a Japanese adaptation of Chinese Buddhist fare. On the opposite side of the road is a little temple containing a rare item for connoisseurs of Kyoto curiosities: the *Nembutsu-ishi,* a large flat stone in the temple grounds, which devotees of Pure Land Buddhism strike with a pebble while repeating the Sacred Name of Amida Buddha. After this short digression, return to the corner of Kōdaiji-michi, and look inside the entrance to the sub-temple next door.

The doorway of a curiosity shop selling antiques.

Still on the left-hand side you will soon arrive at a notice-board informing you in Japanese that this is *Entoku-in,* a Zen temple founded in 1606, whose open gate usually allows a view of its typical Zen-style entrance-garden and architecture. Next door, on land leased from Entokuin, the picturesque *Bunnosuke Chaya* will be recognized by its two lanterns: a large metal one of the Meiji Period and a red paper one hanging in the entrance-gate, along with some old signboards advertising its delicacies. Once you step inside, you will be transported into the past by an atmosphere still redolent of Old Kyoto. For this enchanting tea-house has served three generations of patrons since 1912, when a famous *rakugo* or comic narrator of the Meiji and Taisho Periods, whose stage name was *Bunnosuke,* converted the three hundred years old building into a Chaya. It soon became the fashionable haunt of Noh and Kabuki actors and other theatrical devotees, and its interior is papered with old stickers and playbills announcing their appearances. There is also a glass-case or two filled with dolls representing *O-Kame-San,* Goddess of Happiness, Frivolity, and Mirth. A clay image of O-Kame-San, or rather *O-Tafuku* as she is called in Kyoto, is enshrined outside the kitchen near an old earthen stove once used for heating water for tea. The true name of this fat-cheeked Shinto goddess is *Ame-no-Uzume-no-Mikoto,* and she is slightly notorious in Japanese mythology. For when *Amaterasu Omikami,* the Sun Goddess, hid herself in a cave and refused to emerge in protest at the outrageous behaviour of her brother, *Susanō-ō,* God of the Typhoon, O-Kame-San did a bawdy dance on a tub till all her clothes fell off! The laughter of the eighty million Shinto gods at her comic performance enticed the Sun Goddess to peep out of the clouds to discover the cause of their mirth. Nowadays, *O-Tafuku* is represented as the typical Japanese Auntie, plump, fortyish, and jolly.

• Here is your opportunity to be daring and try some of the Japanese delicacies offered by this tea-house, such as *amazake* or unfermented sake, a non-alcoholic but warming winter drink, which tastes rather like hot sweet barley-water and is spiced with a touch of ginger. With this is recommended a serving of *warabi-mochi,* a delicious jelly prepared from bracken fern shoots. This is cut into cubes and dusted with a light brown powder made from roast soyabeans sweetened with a little sugar. Or, if you prefer something savoury, why not try *tokoroten,* vinegared gelatine noodles flavoured with *shoyu* or soyabean sauce? After these refreshments, you will no doubt wish to explore the diminutive grounds; and right next door to the tea-house itself you will come upon the rustic studio where you can buy a biscuit-fired plate, dish, or pot. With the brushes and different coloured glazes provided, you can then decorate your own piece of *raku-yaki,* or soft-bodied pottery, which will soon be fired at a low temperature in the temple kiln nearby.

While you are waiting for your masterpiece to emerge from the kiln and to cool, you might look into the tiny

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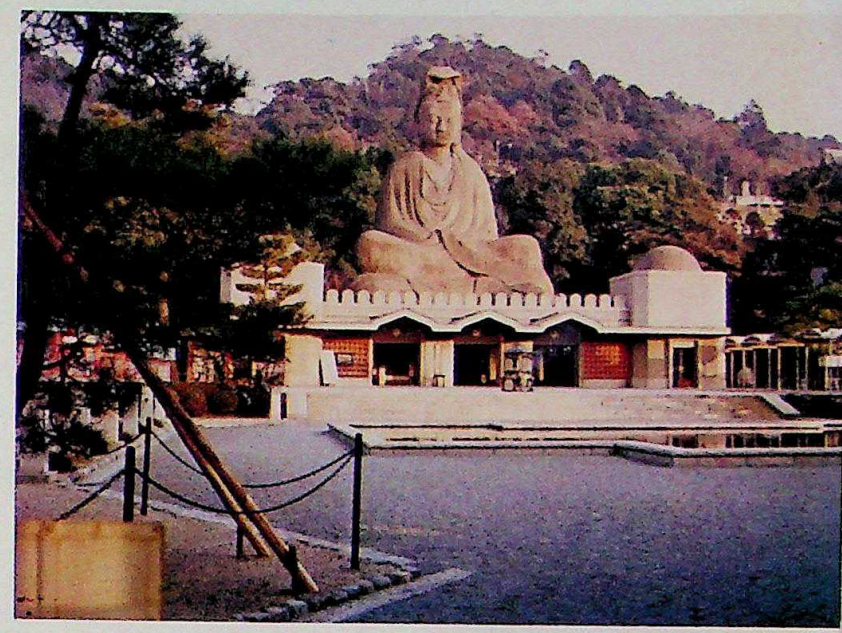
mple whose altar occupies its whole interior. antechamber, the priest will tell your fortune by s of the *Eki-kyō,* as the Chinese *I Ching* or 'Book anges' is called in Japanese. Then you can peer gh the slats of the gate at the neglected but still iful garden, which dates from the time of Hideyoshi's , Kōdai-in, but to which the public is not admitted. e this gate stands a stone monument, under which buried the fans of Bunnosuke and other *rakugo* of eriod. When you return to collect your piece of *akuyaki,* you can catch a last glimpse of the Yasaka da over the temple-roofs.

reluctantly leaving Bunnosuke Chaya, you will notice her run-down sub-temple opposite, the *Geshinin,* has a tile-roofed white wall, incised with a moon to divide its inner from its outer garden of luxuriant From its front steps, beside the stone slab chiselled me calligraphy as cursive as a snail's trail, you can iew the charmingly rustic cottage of the potter who opposite. Note its tamped earthen floor, which in er turns green with moss, and its raised inner tea- ony room, as well as the naturally irregular wood in its construction and the tiny garden under its w, which usually displays a piece of the potter's art.

continuing your stroll along *Kōdaji-michi* between d roofed walls, you soon come to another potter's y room under a pergola with vine, on the same side unnosuke Chaya. Your attention will be caught by hop of the Two Red Umbrellas, on the opposite side e street. It sells printed *noren,* masks of papier-mâché painted purses and wallets, and other *miyagemono* uvenirs. Its ancient water-basin, fringed with grasses erns, drips with coolness on a hot day.

er passing a second gift-store selling the *meibutsu* aracteristic products of Kyoto, and a bridge, over a channelled from the mountainside, you will arrive other restaurant. Formerly a private residence whose would sometimes show the lucky foreign visitor his house and garden, this has recently been con- into a restaurant and coffee-shop. So now anyone ew its narrow but enchanting garden, which extends d two sides of the dwelling. While you enjoy your or coffee, you can look out on its greenery with nd sleeve-fence, its waterfalls and pond crossed by curved bridges. But its main attraction is a superb tion of *nishiki-goi* or 'brocade carp' of amazing patterns, and colours, which are enhanced by water illumination at night. Here the narrow street s and is lined with traditional mansions and rants. Straight ahead above the trees rises the aku, one of Kyoto's older architectural follies, built the 1940s by the pearl-merchant Okura in the ds of his house nearby. Its only redeeming feature gilt bronze crane with outstretched wings which unts this concrete imitation of one of the *hoko* or loats in the Gion Festival of 16 July.



The Ryōzen Kannon, *eighty feet high, modelled in 1955 in memory of all those who died in the second world war. 'To the right of the temple, there is also a small chapel to the Unknown Soldier of all nations.'*

Continue on to the cross street, and then turn right uphill, past the beautiful old mansion whose front door is guarded by two Chinese stone lions. This is the residence of one of Kyoto's best-known collectors of antiques and is furnished like a museum. The newly constructed temple with belfry which you are now passing on your left is called *Daiunin,* and owns a tall stone Kannon which stands in its forecourt. The street now divides, and if you wish to cut this walk short, take the left-hand turning, which will take you directly to *Maruyama Park.* But if you still have time to spare and are not totally exhausted, your curiosity may lead you on to take another detour. Instead of turning left, continue straight on uphill, and at the first house on the right past the corner, you will see a notice-board and a narrow entrance. Have no hesitation in entering the gate and walking down the long narrow passageway past the house, until it opens out into an inner yard. In this you will discover the *Basho-dō,* a tiny thatch-roofed hut which occupies what is claimed to be the original site of the retreat of *Matsuo Bashō* (1644-1694), most famous of all haiku poets. This chapel to his memory is quite literally a 'ten foot-square bamboo hut', and inside has an altar dedicated to him with small portraits of the poet in ceramic sculpture in a glass case to one side. Under the overhanging trees in the rather gloomy grounds a few stones are inscribed with some of the poet's seventeen-syllable verses.

When you leave by the same narrow passage and find yourself again in the street outside, walk uphill, and next door to the Basho-dō you will come on another but larger thatch-roofed cottage, which looks as though it was once in the country but has somehow survived by mistake in the midst of the city. This is the *Saigyō-an* or Hermitage

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of Saigyō, a celebrated *waka* or lyrical poet of the Heian Period. *Saigyō Hōshi* (1118-1190) renounced the life of a Heian courtier while still a very young man, and spent the rest of his days as a wandering Buddhist priest and poet, composing some of Japan's loveliest lyrics. The present cottage is, naturally, a later reconstruction but is said to occupy the site of his original hermitage, and is now a tea-ceremony school. Its entrance gate is a little higher up the hill, and leads down into a courtyard which contains the gravestones of a number of other poets and a small square chapel to Saigyō, with a tumble-down and mossy thatched roof. You can partake of an *o-kashi* and a bowl of *matcha* (a Japanese-style cake and whipped green tea) in the Saigyō-an itself, with its old stone well-curb and its separate tea-house set in the neglected but atmospheric garden.

The street outside continues to climb the hill toward

A metal lantern of the Meiji period, one of two indicating the Bunnosuke Chaya *(tea-house).*

the *Higashi Otani,* passing on the left a garden of *hagi* or bush-clover, which blooms in fountains of pink or white pea-flowers in September. Then you will see, set well back, a minor temple whose grounds have largely become a stone-mason's yard, filled with gravestones and funerary monuments for sale. On your right you will skirt a deep but narrow defile called *Kikutani* or Chrysanthemum Valley, which is lined with old-style ryōkan or Japanese inns. The wooded ridge to the south is occupied by Kōdai Temple and its twin tea-houses, while against the sky you can gaze up at the densely forested peak of Ryōzen, Mountain of Departed Spirits (seen previously as the background to the giant Kannon). The lower slopes of Higashiyama are here terraced into the *Higashi Otani Cemetery,* with tier on tier of gravestones. When each of these is illuminated by a single candle on the nights of 14-16 August, this cemetery becomes a moving sight. Enter the precincts of the Higashi Otani by its small south gate, and on your right, after you have passed the belfry, you will observe a flight of stairs ascending the mountainside. At the top of these lies the memorial tomb to Shinran Shōnin.

The plain stone monument behind the ornate carved fence and gate actually contains the ashes of the Abbots of the Higashi Honganji and other Jōdo-Shinshū followers. On descending again to the lower level, the temple offices and pilgrims' rest-house will be seen in front of you with the Hondō or Main Hall, and behind that again the new Abbot's residence, to your right. It was burnt down in a summer thunderstorm in 1973, but by 1976 had been reconstructed almost exactly in the original style and materials and in fine traditional taste. Now take the path that leads down the steps to the Front Gate and the magnificent tree-lined approach paved with flagstones which descends to join Kōdaijimichi one block north from the point at which you left it on this detour.

Having turned left at the corner of Kōdaijimichi, proceed past the *Daiunin's* Main Gate on your left, next door to the Okura mansion. Soon you will cross the great avenue which ascends from the foot of the hill to the front gate of the Higashi Otani, and enter *Maruyama Park.*

At the largest of the park's many weeping cherry-trees which stands on a mound in front, its branches supported on crutches and frames to prevent the weight of blossom in spring from breaking them, take the left-hand path. The concrete building in semi-traditional style on your left is the *Yamabokokan* and houses the two kinds of floats, the tall *hoko* or *boko* and the low and square *yama,* which appear in the Gion Festival in July.

A red wooden *torii* in front marks the entrance to the precincts of the *Yasaka Jinja* or Gion Shrine, sacred to both the geisha and the potters of this district. First on your left after the priests' residence is a small *Inari* Shrine, guarded by its two white foxes. Then the narrow path opens out into the main courtyard of the shrine

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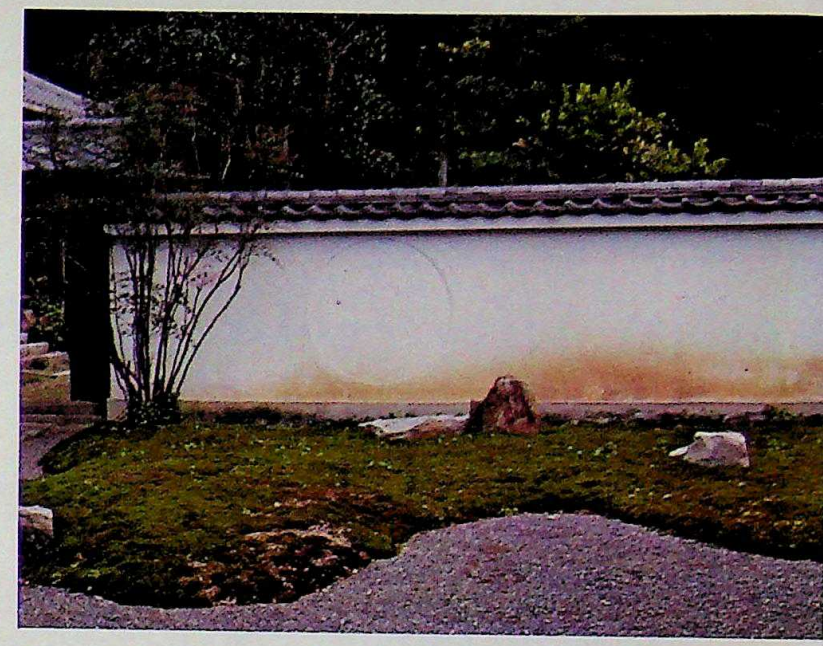
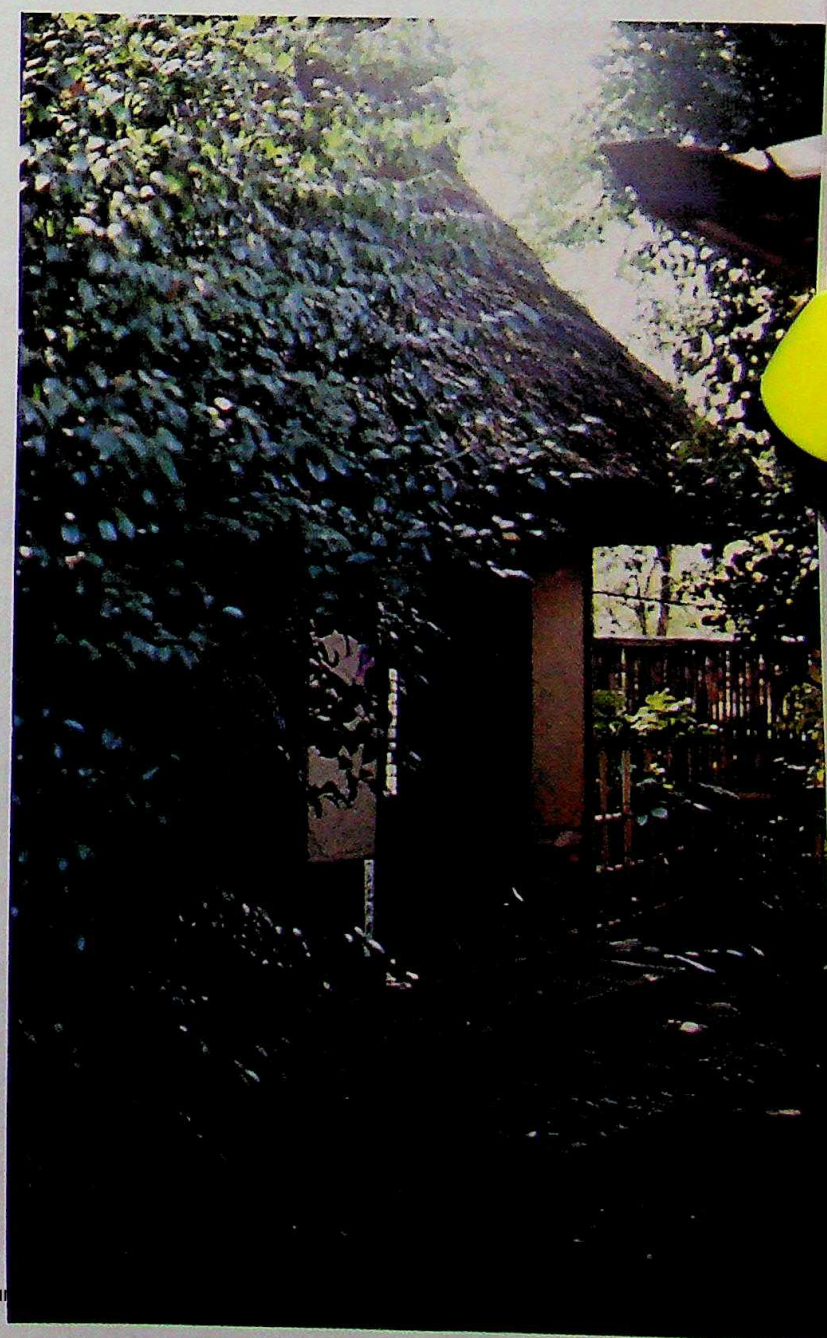
the south are the temple offices, the Noh stage, and vermilion two-storeyed gate, with its stacked offerings the straw covers of sake-casks. In the centre stands open-sided copper-roofed musicians' pavilion and ce-stage, where geisha sometimes perform their dances the *kami* or god of the shrine. At night it is charmingly minated by many rows of white paper-lanterns. On your is the Main Hall with a cloister at its east end. ce the gilt bronze trimmings on barge-boards and le-ends, and the pictures of the thirty-six famous poets er its eaves. Continue straight ahead past the shrine e selling charms and fortunes and down the stairs ne lower level, where the path bends to the right. ng festivals, this path is lined with booths and stalls ng food, ink-sticks, artificial flowers, toys and a variety games, and the atmosphere of a medieval fair pre- s. In the distance you can glimpse the Shinto gallery *ema* or votive pictures hung under its beams and s, and in front of this is an archery-butt, where you try your hand at bending and shooting the Japanese

ut here our walk through another world draws to its e, and we now depart through the front gate of aka Shrine, with its two guardian warriors seated on er side in stalls. At one side of this vermilion and e gate you may well see a long line of young girls ing to consult a palmist on their chances in love. n we must descend the flight of stone steps that lead n into *Shijo* Street and the twentieth century.





moon-wall at Geshinin; 'a tiny thatch-roofed hut which ies what is claimed to be the original site of the at of Matsuo Bashō (1644-1694, most famous of all haiku poets)'.

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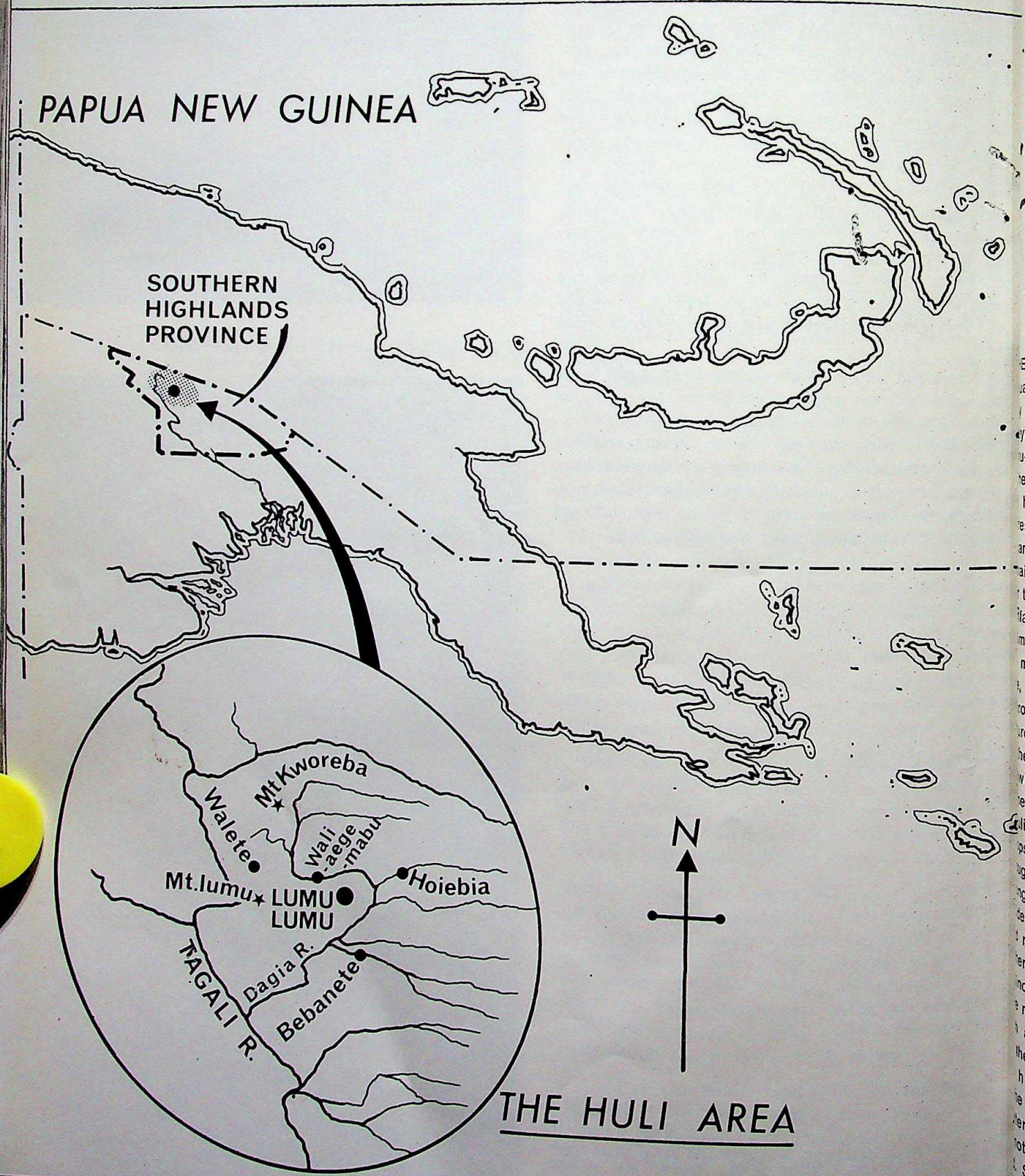

THE HULI AREA

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THE HULI AND THEIR MUSIC

Jacqueline Pugh-Kitingan

E HULI form one of the largest ethnic groups of a New Guinea, numbering over seventy thousand. inhabit the Tagali river basin and surrounding s of the Southern Highlands. This area centres at u-Lumu, which the government calls Tari.

e region lies at an altitude of between one thousand hundred metres and two thousand one hundred es above sea level. Limestone outcrops and old anic ranges are scattered through the basin, which ains rich fertile soils. Some of the higher peaks are three thousand four hundred metres above sea level. fall averages around two thousand five hundred metres annually, while temperatures vary between minimum and 27°C maximum. Due to the high alti- there are no seasonal climatic changes. These ronmental factors encourage the subsistence agri- re of the Huli, whose staple diet is the sweet potato. heir gardens, people use burning-off, composting, wing, mounding and extensive drainage systems. The er drains are used as trenches during warfare.

li society is based on a complex system of cognatic ps, in which descent and inheritance are traced gh all male and female links to common ancestors. g kinship ties enable people to travel about and e with any of their cognates. A person thus holds rights and responsibilities in places away from his er homeland.

nce the Huli have cognatic descent structures, they no hereditary social hierarchies. While some people, as war-leaders or legal-orators, become renowned heir special talents, each person considers himself his opinions as important as those of anyone else. e Huli do not live in villages or communes, but in ered family groups in their gardens. Married couples ot cohabit, but occupy separate houses on the same . Since a person has multi-local residence, spouses live several miles from each other. Most houses ain children. Girls live with their mothers until they marry, while boys move from their mother's house to their father's house when they are around five years old.

The Huli initiation for males is an educational process which begins when a boy moves to his father's house and continues until he is a man in his late twenties. The final stage involves living in the bush for several years, away from the presence of women and married men. Here initiates are instructed in survival techniques by *haroli* or members of the bachelors' group. If he passes his tests well, a man may join the *haroli* for life and remain celibate. Otherwise he will eventually marry.

Haroli are easily distinguished from other men by their elaborate outfit. They paint their faces red, yellow and black, and wear crescent-shaped ceremonial wigs. These differ from the usual rounded wigs worn by other men. Most men wear skilfully woven wigs of human hair and cuscus fur, which are decorated with bird of paradise plumage and everlasting daisies. Usually a married man only wears the crescent-shaped wig on ceremonial occasions.

Men do not marry until they are in their late twenties; girls may marry after puberty, which usually occurs at eighteen to twenty years. Marriages are by choice. Couples court each other in groups or alone, but must avoid physical contact. A marriage is legally recognised after a man has presented his affines with a substantial gift of pigs. A bride may then reside with her mother-in-law, or occupy a house which her husband has built for her. Sexual relations commence several months later, taking place in the gardens. Huli society forbids incest (including marriage between distant cognates), adultery and pre-marital sexual relations. Huli women enjoy an important place in the society, and can be as influential as the men.

A middle-aged man may court an additional wife at a *dawanda* or courting-house. Attendance at a *dawanda* is open only to married men and single women or widows. The Huli regard dawanda as immoral gatherings because

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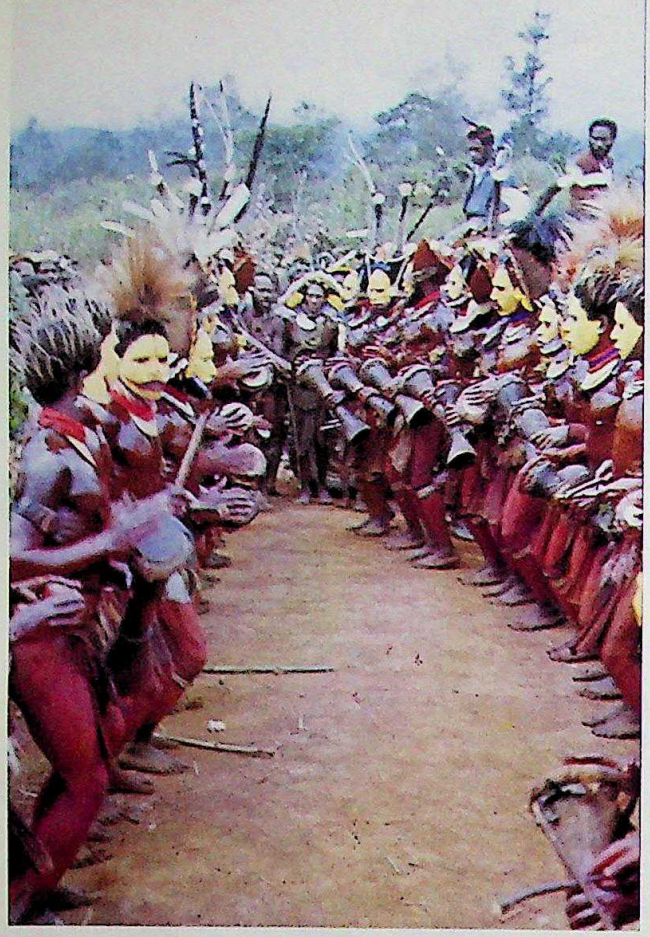
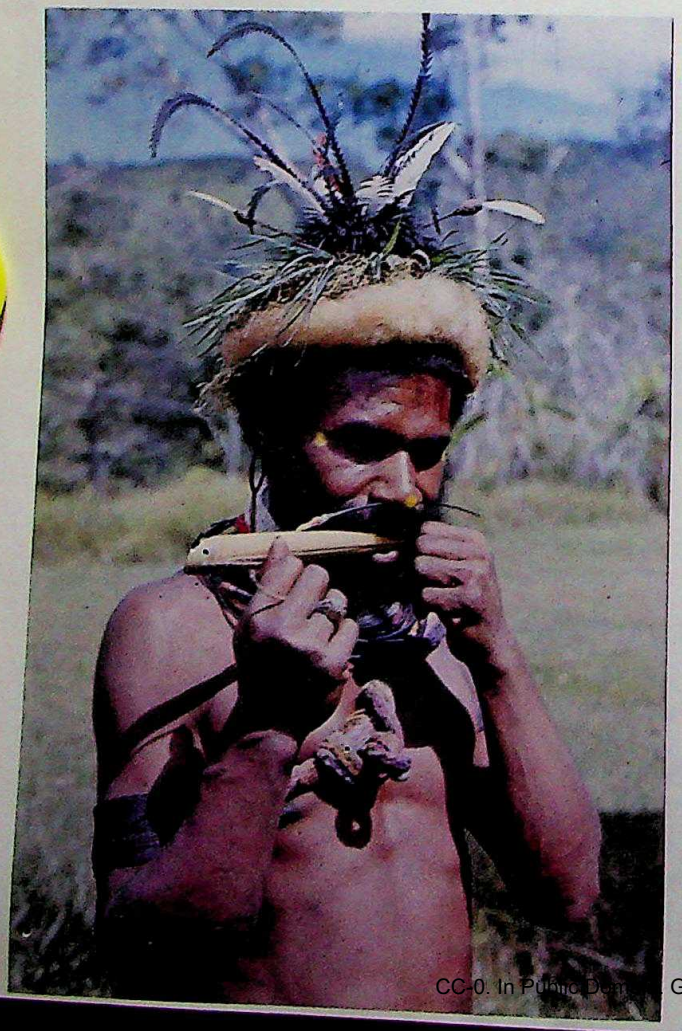


Woman playing her gawa; *below, a man playing his* hiriyula. *(All photographs by the author).*



men and women sit together around the same fire. The men serenade the women with somewhat suggestive songs.

The highly individualistic temperament of the Huli is reflected in their music. Although they have no specific term which can be translated as 'music', they perform many genres of vocal and instrumental musical expression. Most of these are solo and in nearly all language forms a vehicle for communication and personal expression.

Communication, through the articulation of poetic verses, is an essential feature of the performance of the orally-resonated instruments *gawa,* a double-stringed, plucked musical bow, and *hiriyula* (also called *hiliyula, hiliyule* or *yulambe*), or jaw's harp. The structure of the gawa and manner of stopping its inner strand vary slightly between men and women.

When playing these instruments the performer moves his tongue into different positions for different sounds, as in speech. Instead of using his vocal chords to produce the words, he uses the sound energy from the external instrument. The practice of articulating words with instruments such as these has not been found to be so widespread anywhere else.

The gawa and hiriyula are frequently played during courtship or when people are in the mood for love. The hiriyula is often played in front of one's *lawini* (beloved) as an expression of love. The gawa, however, is not performed before the *lawini.* It may be played in the presence of the *lawini's* kin to impress them; or it may be played when the performer is alone and thinking of the lawini.

Subjects for verses articulated on these instruments can refer to past clan battles, features of the countryside and natural phenomena. Whatever the context of performance, the gawa and hiriyula are used to express a person's thoughts and feelings. The structure of their verses is typical of all Huli poetry—a line with a set grammatical form is repeated several times; with each repeat one word, such as a place-name or name of an object, is changed.

Gulupobe is the generic term for bundles of bamboo panpipes played by initiated men. The most common gulupobe consists of seven tubes, the shortest tube being stopped by a node in the bamboo. This instrument has no specific name—it is simply called 'gulupobe'. The *gulungulu* is a longer, less common, version of this, with its longest tube almost a metre long. The shortest gulupobe is the *pulugela* or *gelagi,* which contains eight tubes, four of which are stopped.

These solo instruments are usually played to pass time. The gulungulu is usually kept in a man's house and played at night; the other instruments are played outside when a man is not working. Both the gulungulu and its shorter counterpart can be played when unmarried men are courting, in which case they may sometimes whisper words or verses into the tubes during performance.

The pulugela is played by married men with children. Tunes created on this instrument are imitations of *iwa* or

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p yodelling. A gulupobe is a personal instrument and ot played for the entertainment of others. It is said when a man goes on a long journey, the distance seem shorter if he plays his gulupobe as he walks g.

nother important Huli musical instrument is the *layano ge,* a drum made from layano tree wood and having ngle head of kas-kas skin. The common *tombena* h-pitched) layano tabage is played by groups of male ers in ceremonial dress at rituals like a *tege* or a

tege is performed during famine or crisis to placate is, in particular *ni,* the sun. It involves the assembling arious clan groups, during which the host clan pro- s mass pig feasts as a form of debt settlement. *tege* opens with crowds of people running around ther, while men cry the group yodel named *gela.*

mali is traditionally performed to celebrate the death n enemy from sorcery. It is a dance ritual performed a number of days, sometimes weeks. The dancers ar painted at certain stages of the performance.

e rare *dinanao* (low-pitched) tabage may sometimes layed by an old influential man at a dance. Usually, ever, it accompanies the exorcism chanting and ing of *dawe haga agali* (spirit men). Hence the tabage layed in groups and accompanies other activities. performance context is different from that of other instruments.

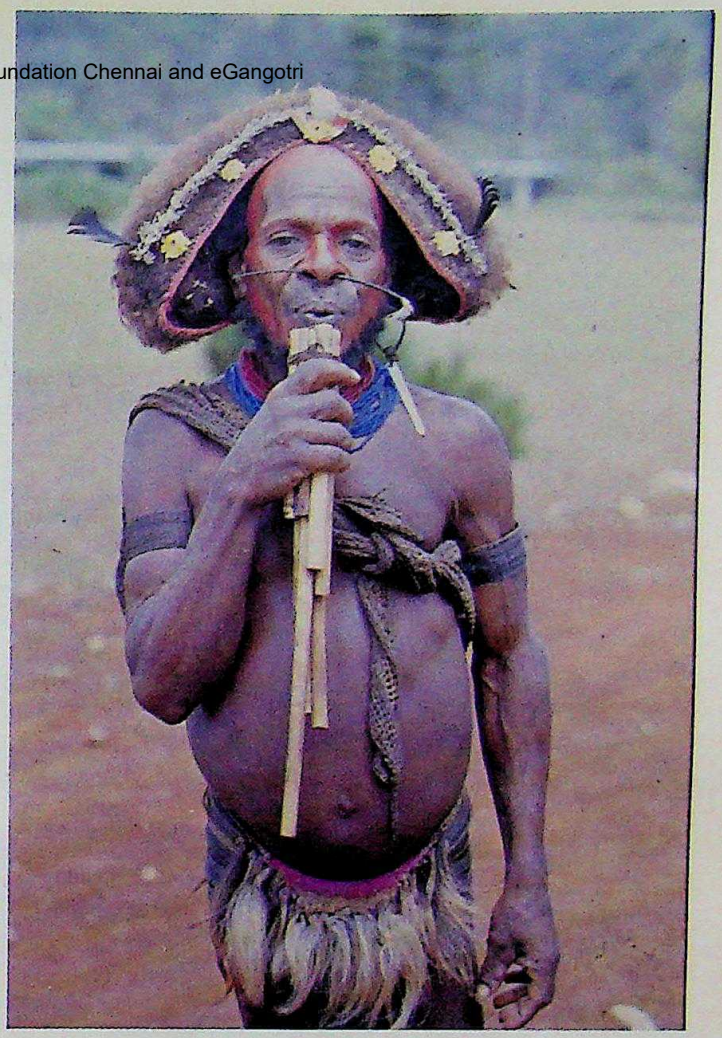
ocal communication is an important feature of Huli re. Men employ *u* (high-falling speech-tone) or lling to communicate across distances. There are different *u* calls each with its own meaning, such he cry 'hako-hako!' which means 'I'm here' or 'I'm ng'. Sometimes short sentences are yodelled across countryside.

nother long-distance call used only by Huli women is death-wail *o* (level tone; pronounced like the English No words are said. The vowel /o/ is sustained on pitch. It is performed by groups of women outdoors to the burial of the deceased. When heard, it may mitated successively by other groups. Thus a chain gnals is established which, in the distance, sounds a continual wail.

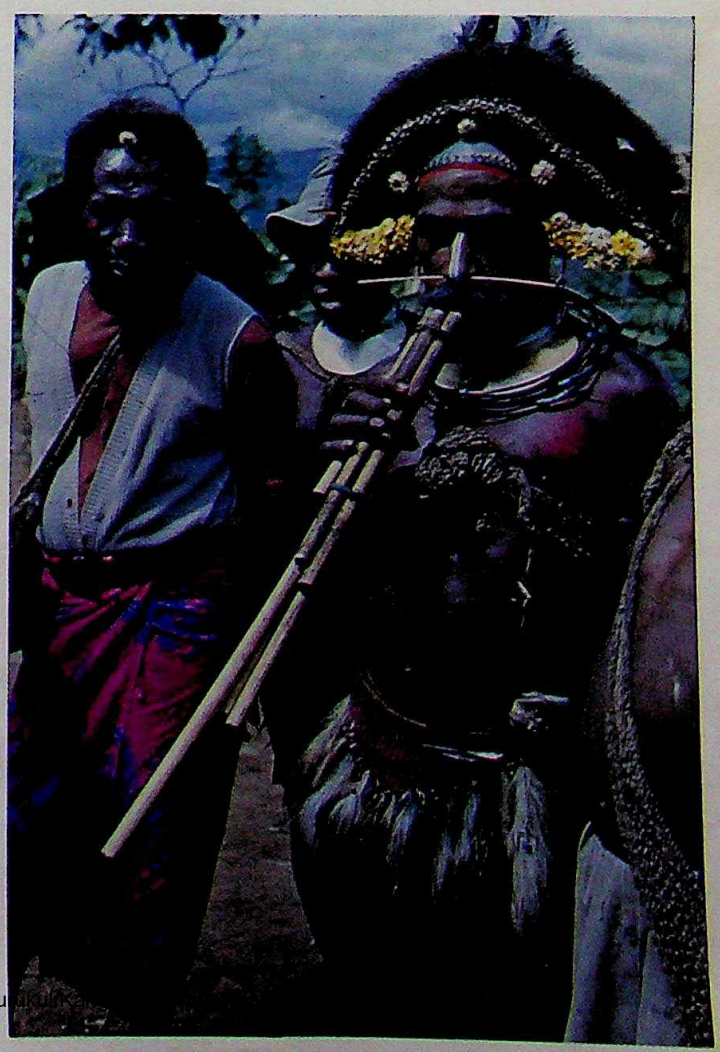
is an essential element in the performance of rning songs called *kiabudugu.* These are performed a woman, singing in a loud impassioned voice about deceased. She also mentions place-names, personal es and names of other deceased people. At the end ach verse all the women sing o. When their breath out, the soloist continues.

e Huli have other types of death music, such as the eless lament for a dead child sung by a bereaved er, or the *nogo u,* a group yodel by men killing a at the feast following the burial of the dead.

art from the *gela* and *nogo u*, other forms of group lling include the *mali iwa*, which is performed by the ers at the night-time rehearsal for the *mali.* When are lifting heavy logs in the forest, or when they



Man playing a typical gulupobe; *he is wearing a characteristic Huli wig. Below, man playing* gulungulu.



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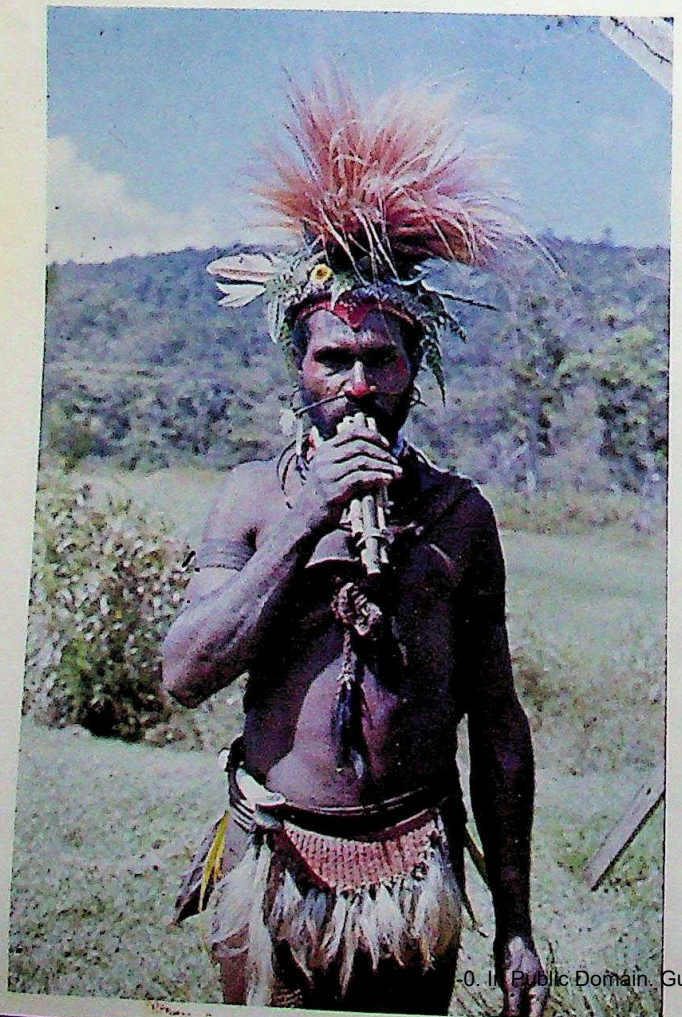
Dancers in ceremonial dress playing layano tabage *at a* mali; *man playing* pulugela.



are returning home after killing in battle, they cry a *iwa* similar to the *mali iwa*.

Some elderly women perform *gamu*, or magic chants for the appeasement and manipulation of evil spirits. A *gamu* is performed away from other women, who could steal it and receive payment for its performance. Each *gamu* performer has her own chant style. These vary from a whisper to a mumbled recitation using two or three pitches. *Gamu* verses have obscure meanings and employ much allegory. Favourite words are used for their magical powers.

There are different types of *gamu* for various situations. *Dagia gamu*, for example, are for girls who want to marry wealthy, handsome husbands. *Waneigini gamu* (*wane*/daughter *-igini*/son = children) are for sick babies. *Hubibi gamu* are for the protection of certain individuals such as a woman's husband who may succumb to another woman's charms, or for warriors who are endangered in battle.

Bi te (*bi* = talk, *te* = story) is another genre performed by both men and women. These are fireside stories, sung indoors at night, to entertain young people. The story-teller begins by saying 'I'm telling a story. You say *e* or my parents will die'. So, one of the listeners interjects with *e* at the end of each sentence to inform the story-teller that he is not wasting his words on a sleeping audience.

Bi te is a prose form sung in a melodic recitation style in which melodic phrases move around one pitch. Addi

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al pitches may be used, but they always return to central pitch at the end of each sentence. Linking ases, such as *laya* (said) or *larugo abiyani* (which I that) are used to join each section or sentence with next. This assists the story-teller in his performance. at skill is required to maintain the flow of words out losing track of the story.

te may be historical, mythical or completely original, can last from a few minutes to several hours, depend- on how the story is developed. They can include orous or descriptive episodes, but usually have sad ngs.

ongs sung at a *dawanda* belong to a genre called r *u* (level tone, nasalised, not to be confused with u) *bagana.* U are group performances, sung as men walk ther along the road or ride in the back of government ks. Male patients at the Hoiebia Leprosy Mission ital collect every night and sing *u.* Although topics *u* verses are drawn from any source, it appears that are usually love-songs. When sung at *dawanda, u* me specific connotations and are called 'dawanda *u*'. l *u* verses have the same format — a soloist sings a ic line, followed by the group with five more lines; these lines are structurally similar, except for the -last which contains only three syllables. The men falsetto, separating each line with a deep breath. e pitches are used. The central one is a major third e the lowest, and the highest is a fourth above the st. The melody oscillates between the upper pitches, ng to the lowest near the end of a line. Towards the of their first line some of the group begin singing lowest pitch, which continues as a support for the er pitches.

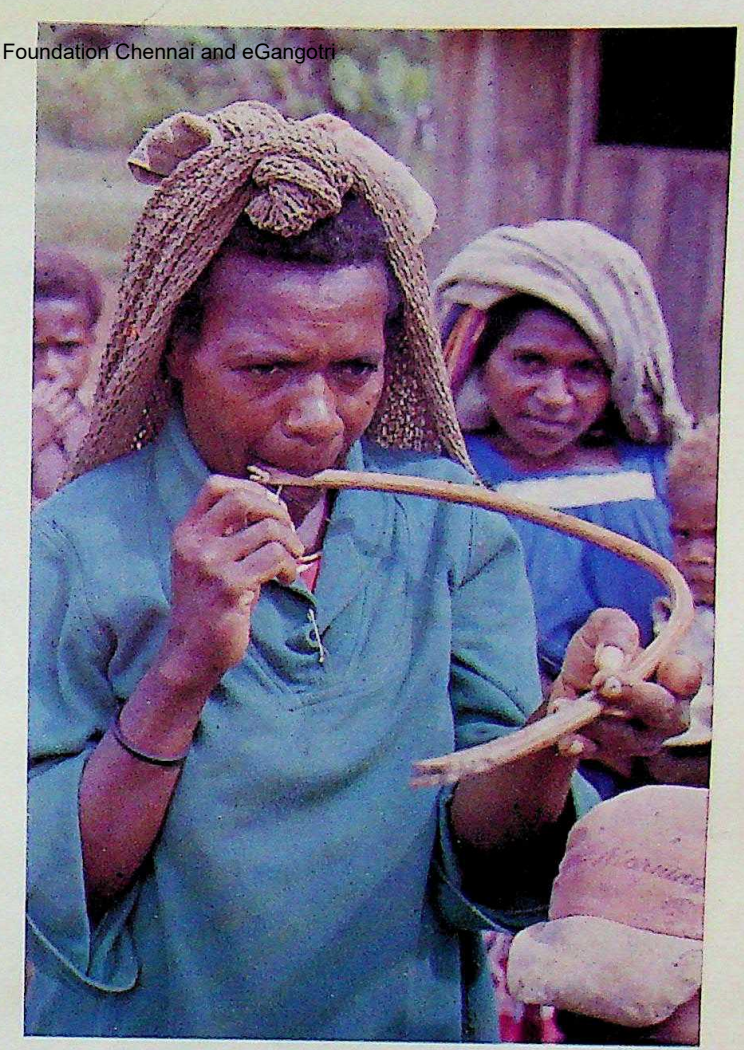
lipe is another courtship genre. It is performed by a g married man, whose *lawini* has forsaken him. ng to his *lawini,* he sings verses in falsetto, using ending melodic phrases of three adjacent pitches. unctuates his lines with shrill blasts on a short length opped bamboo, or pilipe.

lipe is performed outside. The loud, rich falsetto ng and the piercing tone-quality of the bamboo are cially suited to communicating the performer's emo- across distances. Hence the unfaithful girl will learn s anguish and, hopefully, return to him.

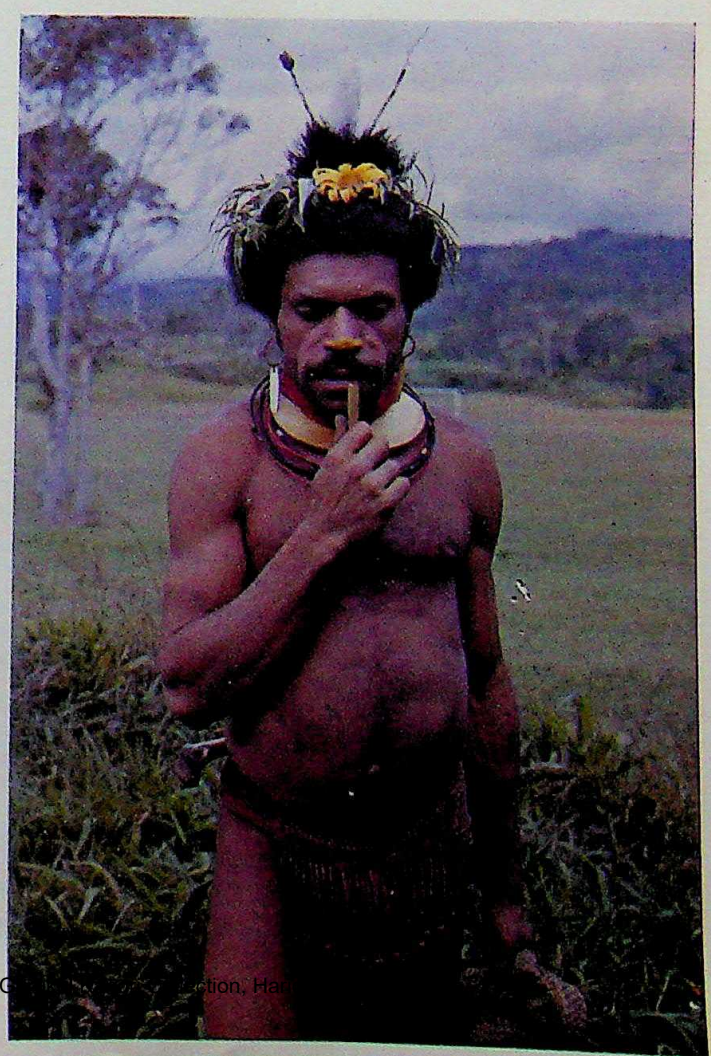
in all Huli vocal music, the rhythms of the words determine the rhythmic structures in the music.. e is no concept of metre in Huli music.

om this brief account, it can be seen that the cognatic ture of Huli society has produced a temperamental iduality in the people. This encourages self-expres- which influences Huli music. Most genres of Huli are solo, and use language communication as an al feature.

AUTHOR: *Mrs Jacqueline Pugh-Kitingan is currently com- g a Ph.D. on the ethnomusicology of the Huli people at University of Queensland.*



Dancers at a mali*; a young man performs a* pilipe.



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'DARK AS A CLOUD'

Benjamin Preciado-Solis

KRISHNA, the young god with a pleasant smile, for turies has captivated many people and even now mands the allegiance of a great section of the Hindu ulation. His cult has in recent years reached the res of the Western world.

The story of Krishna is like a fairy-tale. He was born prison, where his mother, Devaki, was kept by her sin, the tyrant Khamsa of Mathura, to prevent the ment of a prophecy that he would be killed by the nth child of the princess. Devaki had been married Vāsudeva, a neighbouring prince; Khamsa, on hearing prophecy, attempted to kill her, and only spared her when it was promised that he could kill all Devaki's dren. He killed the first six, but the seventh, Balarama, artial incarnation of Vishnu, was transferred miracu-ly before his birth to the womb of Rohini, another e of Vāsudeva. The eighth, Krishna, a god in human n, was secretly exchanged immediately after his birth the daughter of the chief of a neighbouring pastoral e. This girl was killed by the king and, being herself oddess, on her death announced to her murderer that future vanquisher had already been born.

Krishna grew up happily among the milkmaids together h his brother, their idyllic existence only interrupted asionally by the monsters and demons sent by their le to kill the little Krishna. These perils were easily rcome by the wondrous child. The two brothers were ed and cherished by everybody in the village, especi-by the womenfolk, who adored them and enjoyed the dish pranks of the pampered boys.

time, this love acquired erotic undertones, mainly ng the young girls who looked after the cows *(gopis).* sometimes even openly proclaimed their longing Krishna's embrace, which he satisfied on a moonlit mn night when he called them with the sweet strains his bamboo flute. Abandoning everything, the *gopis,* f in a trance, followed him, forgetting parents and hers, husbands and children, and went to the forest meet Krishna, the divine lover. In due time, after all mpts to kill him had failed, King Khamsa decided to g Krishna and his brother to the capital to be killed his presence. He called for a wrestling contest and a messenger with a special invitation to them. The s were broken-hearted about the separation from the s. But the young men had to leave and went to face monster-king. With little effort, they killed the tyrant then put their grandfather on the throne. He had been captive by his son Khamsa.

The young men also met Vāsudeva and Devaki, their nts, who had been yearning to see their children since they were born. As any other fairy-tale this should finish at this moment with an 'and they lived happily ever after', but not the Krishna story.

At this point, it turns into an account of the life of the hero as an adult prince.

Shortly after Khamsa's death, the city of Mathura was besieged by Jarasandha, a neighbouring king, and father-in-law of the dead tyrant. He did not succeed in taking the city, but Krishna decided to look for a safer place to live. With his followers, he moved to Dvaraka, a new city by the sea (today, in Gujarat State). There, he spent the rest of his very long life, engaged in the work of a governing prince, acquiring his sixteen thousand wives, begetting children by the score, making war and killing his enemies: nothing as extraordinary as lifting a mountain with his little finger as when he was a mere lad. During this period, he took part in the events that led to the Mahabharata War, the account of which is found in the most famous epic poem of India, the *Mahabharata,* in which Krishna plays a very important part as a friend and adviser to the five princes, heroes of the main story. It is possible that his great fame and popularity in later times came originally from the tradition of his participation in that war and mainly from the discourse that he is said to have made to Arjuna, the most heroic among the five princely brothers.

Krishna urges him to enter into battle and explains the mysteries of death and life, of the soul, the universe and God. This speech is now well known all over the world and revered in India as the *Bhagavad Gita* or 'The Song of God'.

After helping the brothers to win the war, Krishna retired again to Dvaraka, where many years later he was to die and his whole tribe to be destroyed. One day all the menfolk left the city. After much laughter and merriment, a quarrel started, and soon words of abuse changed to blows. They began hitting each other with bundles of rushes, which were turned into iron maces and all were killed — except for Krishna, although he had taken part.

This massacre convinced him that the time had come for him to leave this world. He sent a messenger to the city with orders for all the women to leave and then retired to a secluded place to meditate. A wandering hunter mistook him for a deer and shot him in the left foot.

From this seemingly straightforward fairy-tale, many doubts and questions arise. The narrative, seemingly simple, originally probably was so, is actually a compilation; just as the character of Krishna was compounded of several people.

The Krishna we know about is made up of different beings. The first clear, though very brief, mention of him is in the *Chandogya Upanishad,* a philosophical text of

Ivory carving of Krishna, playing his flute. (Photograph Darshan Lall, by courtesy Lall and Mall, Jewellers).

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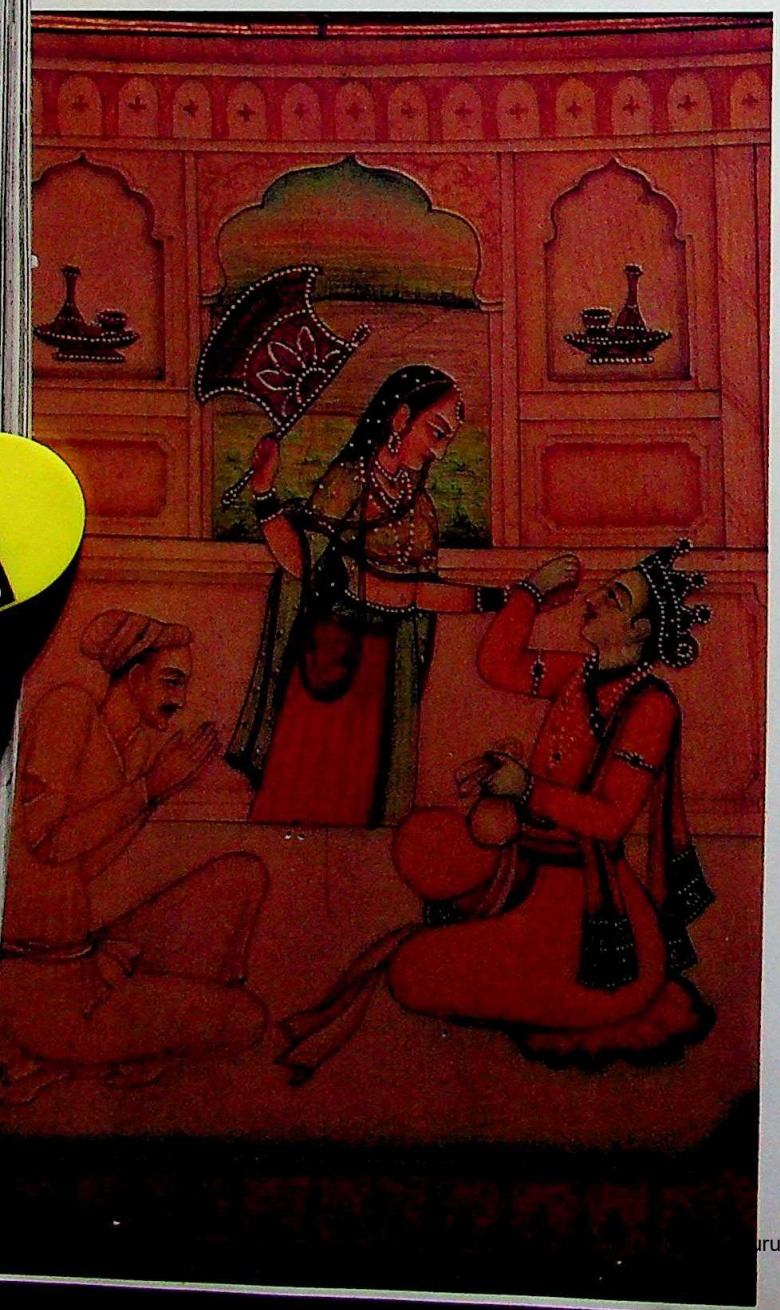
Rasa *dance with the* gopis *of Vrindavana. (Photograph Darshan Lall, from a scroll, courtesy Royal Studio Art Gallery, New Delhi).*

Below: Krishna with Sudama, a miniature painting on ivory, 1860. (Photograph Darshan Lall, courtesy Lall and Mall, Jewellers).



later Vedic literature. In this he is also identified as the son of a woman called Devaki, but no mention is made of his father. In this case, he seems to be still a human being, though in a second reference it is not clear whether he is still a human or elevated to the status of a god. This brief reference is found in the most famous of Sanskrit grammars, the *Astadhyayi* of Panini, dated, very roughly, some time in the fourth century B.C. There is also mention of a special word formation used to refer to the devotees of Vāsudeva (the name of Krishna's father and another name for Krishna himself) and Arjuna, the epic hero always associated with Krishna. Some commentators consider that Krishna, the cow herd, is a figure who emerged as a reaction to the earlier Vedic beliefs and a creation of a pastoral community. As a god, he is an avatar of Vishnu.

Another great grammarian — Patanjali, in the second century B.C. — thought that the Krishna here referred to was not only a warrior like Arjuna but that he was mentioned apart in order to denote his importance as a god. This statement of Pantanjali led some modern scholars to believe that from the fourth century B.C., Panini's time, there were two different Krishnas or Vāsudevas, one the supreme god and the other a warrior leader, and that the two were later identified as one because of the similarity of their names. This, however, is far from certain.

It is clear that originally there was a tradition of a warrior-hero—a prince who, in time, came to be regarded as a god. That the story of his childhood among the *gopis* was a part of that original tradition is not now believed by any of the scholars who have studied this. During the nineteenth and early twentieth centuries there was a strong current in favour of the theory that these stories of Krishna's childhood, especially referring to his birth, were taken from the Christian story of the birth of Jesus. The resemblance in circumstances, such as Herod's slaughter of Innocents and Krishna's own birth, hidden for fear of the cruel uncle who had already killed six of his brothers, led scholars to propose the theory of the Indian borrowing of the story from Christianity; perhaps also they were influenced by the similarity of the names of Krishna and Christ.

But this theory has been proven wrong. There are even stronger coincidences with other myths of the Mediterranean area, like those of the Egyptian god Horus and, above all, the Greek story of Perseus. So the theory of the Christian influence is discarded, but the question of possible western influence on the Krishna legend is still open. Indeed, similarities between the Indian and Greek myths had been found as early as the fourth century B.C., when Alexander the Great came with his armies to the Indian sub-continent and occupied most of what is now Pakistan. Megasthenes, a Macedonian sent some years later as an ambassador to the court of Chandra-gupta Maurya, states that a people whom he calls 'the Sourasenoi, who have a city called Methora, and through whose country runs the river Jobares, worship Heracles'.

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Detail from the Rasa *dance scroll. (Photograph Darshan Lall, courtesy Royal Studio Art Gallery).*

s now generally accepted that he means a people
ed the Surasenas (to whom Krishna was closely re-
d), always associated with the river Yamuna and the
Mathura, and that by Heracles he meant Krishna.
nother Greek ambassador in the second century B.C.
arently became a worshipper of Krishna, since he
ted a still extant votive column in Besnagar (Madhya
desh), dedicated to Vāsudeva, the god of gods. Some
r inscriptions of around that time also bear witness
he fact that Krishna, quite often together with his
her, was a popular divinity before the Christian era.
ther he was even then thought of as a cow herd, a
of monsters and a lover of milkmaids as well as a
e and a warrior leader is still an unresolved problem.
mming up, we find in the figure of Krishna at least
separate beings — and even three if we take into
unt the theory of an original god Vāsudeva — these
he prince and the cow herd. The prince was sup-
dly the traditional hero of a tribe or group of tribes
d the Yadus who lived in the region of Mathura and
in the peninsula of Kathiawad in modern Gujarat.
cow herd was probably the god of some nomadic
s with which the Yadus came in contact. Whether
e tribes were Indian or came from some other place
ll unresolved.

t us see now what data the iconography provides
rds the solution of these problems — or their further
blication! The fact is that the first extant images of
na are considerably later than the first mentions
im in literature. From the accepted time of the
ndogya *Upanishad* to the date of the recently found
, supposedly bearing the earliest of all images of
Krishna, we have a span of five hundred years. If we do not admit the figure in the coins as representing Krishna we have then a span of seven hundred years between the Upanishad and the next image in the second century A.D. These coins were discovered in Afghanistan in 1970 by a French archaeological expedition. They are six pieces of one drachma each minted by the Indo-Greek king Agathocles who lived in the first half of the second century B.C., with the figure of a warrior on each side. These figures were at first identified with Vishnu and Siva but were later supposed to be Krishna and his brother, Balarama (Jean Filliozat, *Representations de Vāsudeva et Samkarsana au IIe Siecle avant J.C.,* Arts Asiatiques, vol. 26, 1972). This was because of the emblems that they are carrying in their hands. A fact that gives plausability to this theory is that the grammarian Patanjali lived in that remote area of north-west India two centuries earlier and already knew of Krishna and his followers.

There is another image, now in the Museum of Lucknow, ascribed to that epoch. It is a figure of Balarama that was found in Mathura, and he is represented with a canopy of serpent-heads and a plough—his characteristic emblem—in his hand. Since Balarama is generally mentioned along with Krishna we may suppose that images of the latter also existed at that time. Unfortunately this is just an hypothesis, since we do not have any such images. Only after nearly four hundred years do we find another image that can be considered as representing Krishna. This is the fragment of a slab from Mathura on which we can see a man carrying a bundle on his head and standing in water surrounded by fish and other aquatic creatures. On the other side and facing away

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Krishna and Arjuna in a chariot; sandalwood carving of a Mahabharata episode. (Photograph Darshan Lall, courtesy Lall and Mall, Jewellers).

Below, a painting from Mithila, in the plains of the Ganges in northern India, where the women in this matriarchal society are the artists. This contemporary work is of Krishna with two gopis.

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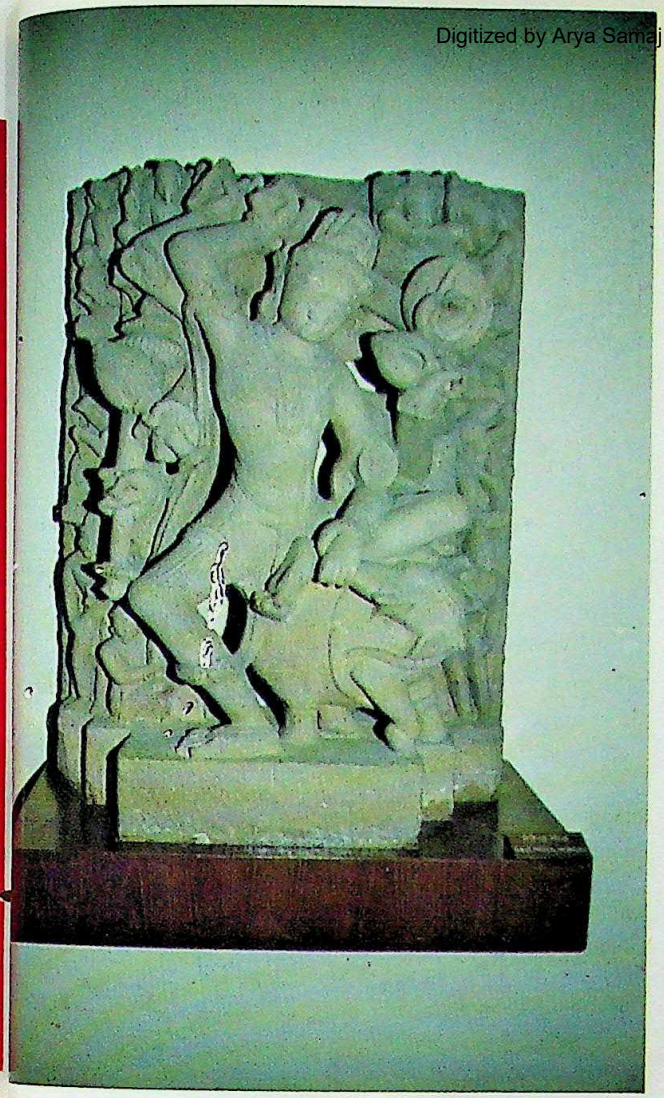
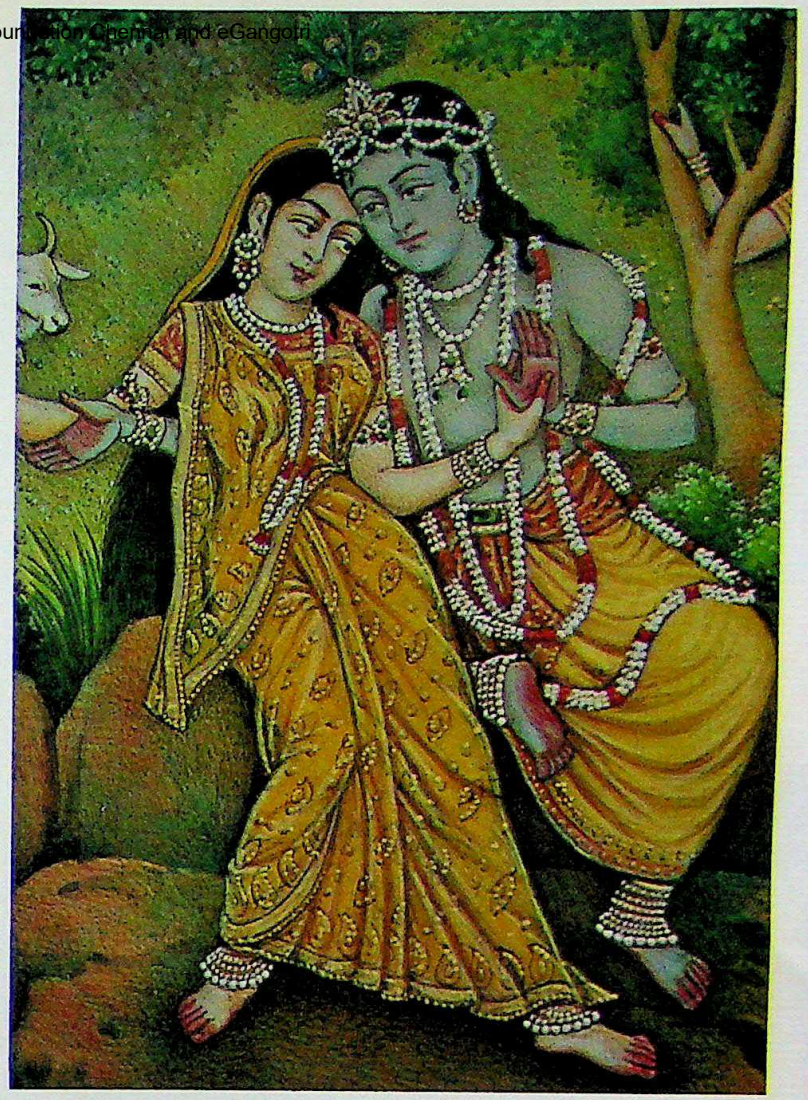


hna slaying the elephant, a carving in stone from the Khajurao Museum. (Photograph Darshan Lall).



Krishna and partner; a detail from a miniature on ivory, 1860. (Photograph Darshan Lall, courtesy Lall and Mall, Jewellers).

m the first is a Naga as if he were saluting somebody
to be seen in the extant fragment of the sculpture.
Daya Ram Sahni, the first scholar to describe this
lpture in 1925, interprets it as a scene from the legend
Krishna when, immediately after his birth, he is carried
his father Vāsudeva through the river Yamuna and is
tected from the rain by the serpent Sesha, who covers
with his hoods. Since this is not exactly what appears
he sculpture, however, Sahni modifies the legend and
s 'the snake deity Sesha advanced in front to drive
ay water with his many hoods' *(Archaeological Survey India, Annual Report for the years 1925-26,* p. 184) and
dly adds 'the representation in this sculpture faithfully
ows the description of the event given in the *Bhagavata* ana and elsewhere', *(Ibid.)* when he knew well that
where is that scene described in the manner he says.
is, the other sculpture claimed to be the earliest
resentation of Krishna is also doubtful. Only in the
ond century A.D. do we find the first certainly identi-
le image of Krishna. This is one of a group of three
ues discovered in 1965 in the State of Bihar *(Journal the Bihar Research Society,* vol. 54, 1968, p. 242 n. 78).
group represents Krishna, his brother, Balarama, and
r sister, Subhadra.
We are now faced with the problem as to whether these images and the others mentioned before presuppose the legends of the child Krishna and so can help us to date the amalgamation of the two stories, the one of the wondrous child and the other of the heroic prince.

First the Agathocles coin with its representation of Vāsudeva and Balarama cannot be considered an evidence of the cult of the cow herd god, since it is possible that it only represents two divinities dear to the reigning king, perhaps with legends attached to them, but we do not know if these legends included the story of the childhood among the milkmaids. Secondly, the Balarama image in the Lucknow Museum cannot be used as evidence, even if it is in all probability a representation of Krishna's brother and therefore points to the existence of stories of their birth, it could well be just an image of a *naga* deity, a serpent godling. Thirdly, the supposed representation of Krishna's father carrying him as a baby through the river Yamuna, if accepted, would provide evidence of the legend of the cow herd god, but its identification is, as we stated before, open to serious doubts. And lastly, the Bihar group representing Krishna, Balarama and Subhadra could also be interpreted as merely three gods without any necessary connection with the legends of the childhood, but in fact the images point very convincingly towards the existence of these stories

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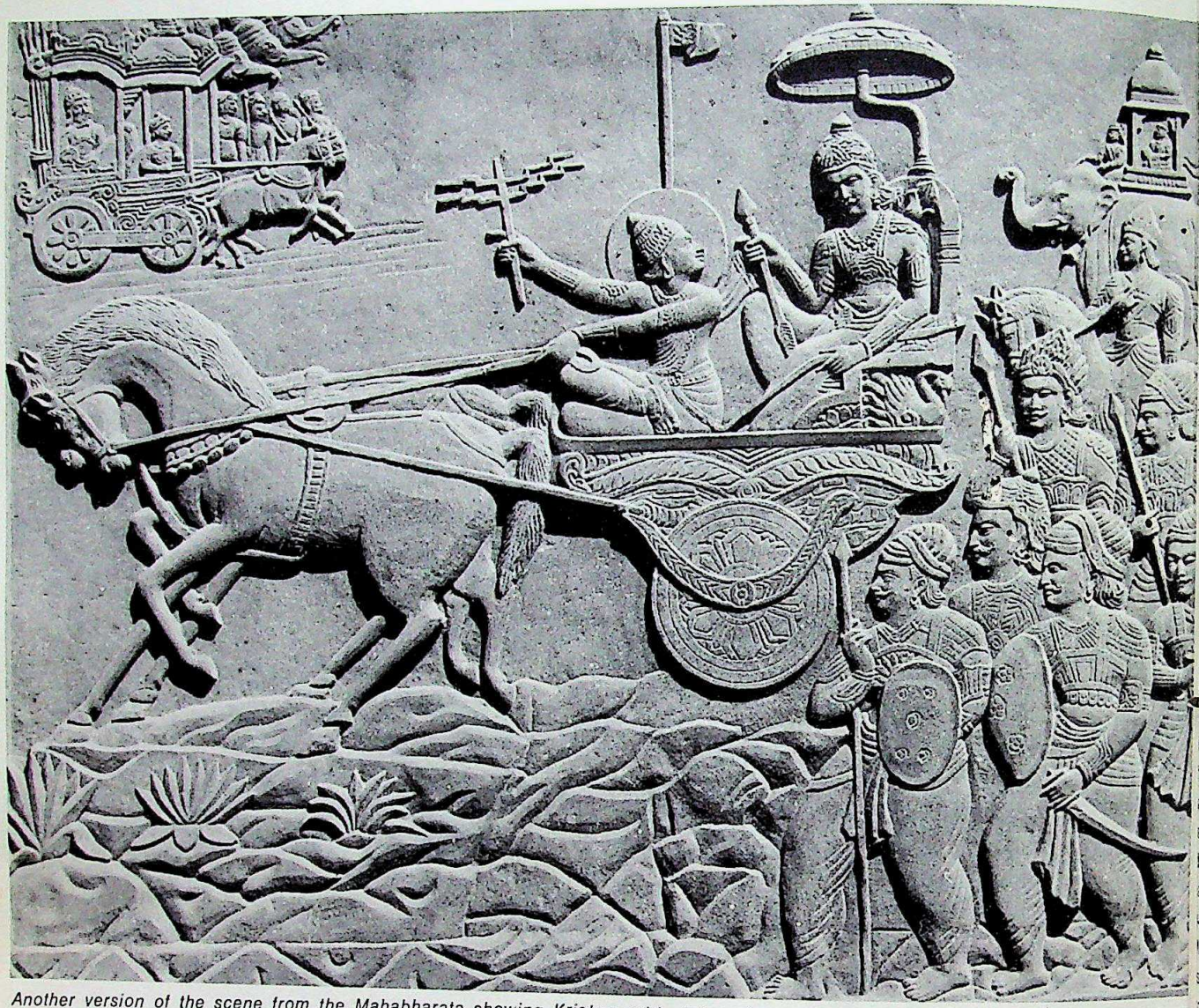

Another version of the scene from the Mahabharata showing Krishna with Arjuna in a chariot. This bas-relief in stone is from a temple on the way to Vrindavana from Mathura. (Photograph Darshan Lall).

and therefore they probably form the first real iconographic evidence of the cult of Krishna-gopala. What makes them so relevant is mainly the presence of the image of Subhadra, the daughter of the cow herds Nanda and Yasoda, foster-parents of Krishna, and therefore his foster-sister.

We mentioned before that on the night that Krishna was born in prison, a little girl was born to the chief of a pastoral tribe across the river from Mathura, and how Vāsudeva, the father of Krishna, carried the baby Krishna and exchanged him for that girl, who was herself a goddess born to save the life of the baby. As such she is worshipped to this day in the company of her two brothers in the famous sanctuary of Jagannath in Puri, Orissa. The identification of these three images of the second century A.D. as the three incarnate gods presupposes the existence of the legend of their birth. This is made even more plausible if we remember that in the second century B.C. Patanjali mentioned the killing of the tyrant Khamsa by Krishna. This also presupposes the story of his birth and, moreover, the *Gatha Jataka,* a story in a Buddhist collection roughly dated in the first century A.D., gives a full version of the story of Krishna, and is therefore the first account of the legend in almost the same form that we have it now.

So, it is only from the second century A.D. that we find the first Krishna image which, although not referring specifically to the cow herd god, points to the legends about him.

The first representation of the Krishna-lila, or adventures of Krishna, is in the so-called Mandor pillars, now kept at the Jodhpur Museum in Rajasthan, considered to date from the fourth century A.D. These are two pillars, twelve feet high, originally forming part of a door-jamb, each carved with four scenes of the early life of Krishna. They were first described by D. R. Bhandarkar and Sir John Marshall in the *Reports of the Archaeological Survey of India* for the years 1905-6 and 1909-10 respectively, although only seven episodes were identified. They are the lifting of the mountain, the fight with the serpent-king,

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overturning of the big cart, the stealing of butter by baby Krishna, the killing of the wild asses, the killing he bull, and the killing of the horse-demon. As we we have here an almost complete cycle of the legends Krishna's childhood. It is curious that, without any ious representation of the individual episodes, we denly find this rather surprising series of reliefs. That d suggest that the adventures of Krishna formed a e from their inception, and were not, as some claim, n from different legends and only later ascribed to nna.

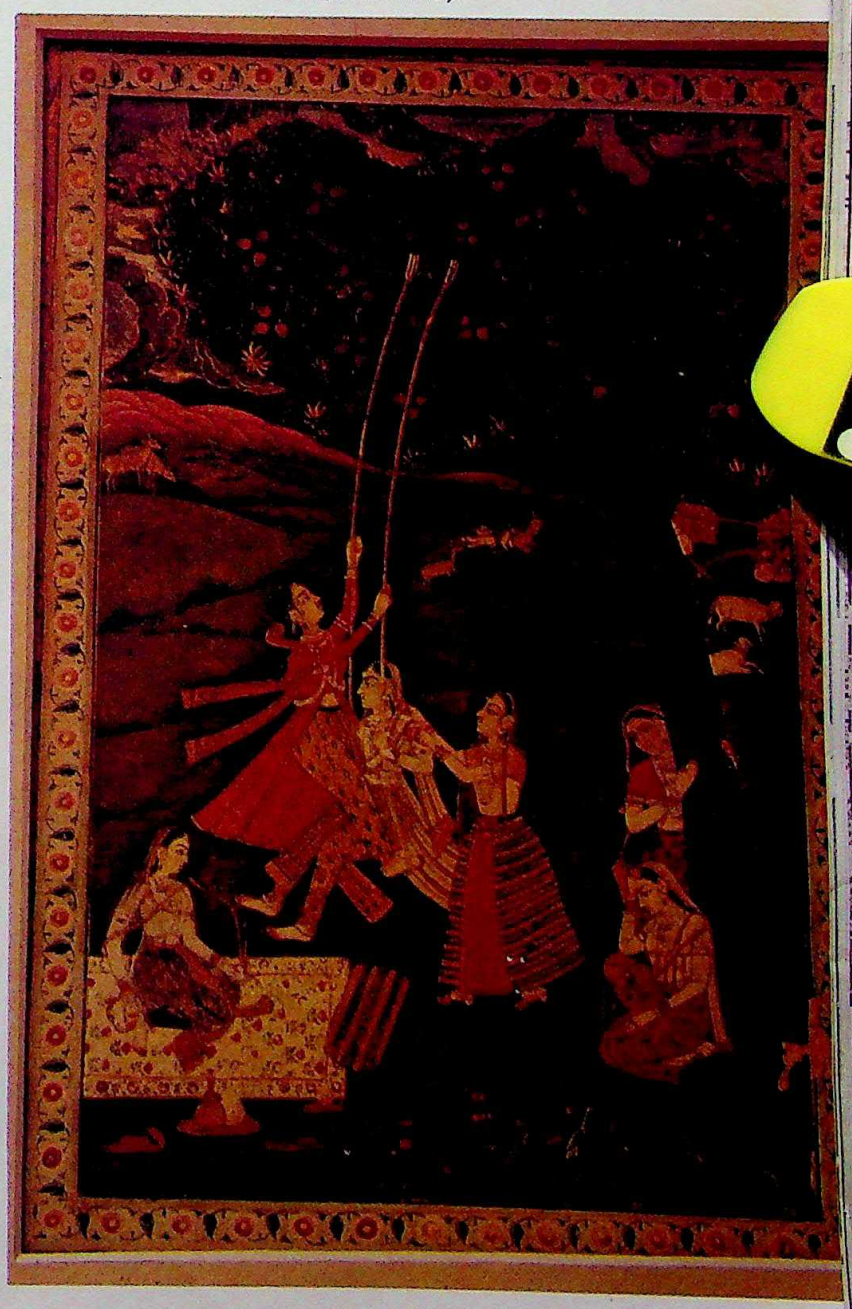
fter these first representations of the Krishna-lila we them more often, sometimes in full cycles, as at dor, sometimes depicting only one episode in nna's life. The episode chosen to be represented e is almost always the *Govardhanadhara* or lifting of nt Govardhana. There are suggestions that this is to Krishna's being originally the godling of that hill he Mathura region, but we believe that this particular of Krishna is set apart only because it very well trates the whole career of the young god, full of digious exploits and acts of prowess. One other feat resented apart because it conveys best the qualities Krishna is his fight with the serpent-king in the waters he Yamuna River.

We have images of Krishna Govardhanadhara from the century onwards first in Varanasi (Uttar Pradesh) and, azingly, also in Kampuchea, a fact that indicates the ensive popularity of the cult. A survey of the dates locations of these statues will give us a very good a of the cult's progress. Besides those mentioned, we e other representations of Krishna lifting the mountain Mathura, in Mahabalipuram, South India, and in Ellora, stern India. Representations of Krishna fighting the pent are found in Mathura, in Mahabalipuram and chipuram, in Kathmandu (Nepal), and in Ellora. Cycles Krishna legends are found after the one in Mandor, Deogarh (central India), in Badami and Pattadakal uth India), in Paharpur (Bangladesh), in Ellora and in a.

l this does not solve the questions posed above, but late appearance of the Krishna images suggests ain interesting conclusions. Among other things it is ble that almost all of these images refer only to the y life of Krishna and not to his later career as a ce, although this is given equal treatment in the texts. would suggest that from very early times there ed that tendency to emphasise the emotional aspect he life of Krishna, those moments more likely to rouse timents of tenderness and affection for the boy cast y into a world full of perils.

author, a Mexican and a graduate of El Colegio de Mexico, oing research for a Ph.D. thesis on the Krishna legends, he Department of Asian Civilisations, Australian National versity, Canberra.

A seventeenth-century miniature showing Krishna with Radha in a classical dance, surrounded by gopis. *(Photograph Darshan Lall, courtesy of the National Museum of India, New Delhi). Below, a miniature of 1750, showing Radha enjoying a swing with* gopis. *(Photograph Darshan Lall, courtesy National Museum of India, New Delhi).*



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Bob Wilson and Pat Green off on a fencing check-up in Western Australia about 1896, using the two means of transport commonest for the job at the time. (Battye Library, Perth).

THE BIKE IN THE BUSH

Jim Fitzpatrick

THE great world-wide bicycle craze of the 1890s swept across Australia. The influence of the machine was felt at all levels of society, and its impact in some areas was tremendous. By 1900 the bicycle had been introduced to every settled part of Australia. Its potential had been demonstrated and utilised to a greater or lesser degree by a number of individuals and institutions in urban and rural areas. But by 1900 the novelty of the machine had worn off: '. . . use of the cycle has become so general and thoroughly incorporated into our everyday life, that it creates no more interest (if as much) than the horse'.

But the bicycle did not become obsolete nor disappear from the scene, either in urban or rural areas. It was, instead, relegated to the status and role of a humble tool, and the decades after 1900 saw its greatest use throughout rural Australia. It was adopted by many private and government organisations and individuals. The particular advantages of the machine were exploited in a variety of physical and social environments. Thousands of travellers, workers, shearers, rouseabouts, prospectors, dentists, commercial travellers, ministers, boundary riders, overlanders and others rolled silently about their business.

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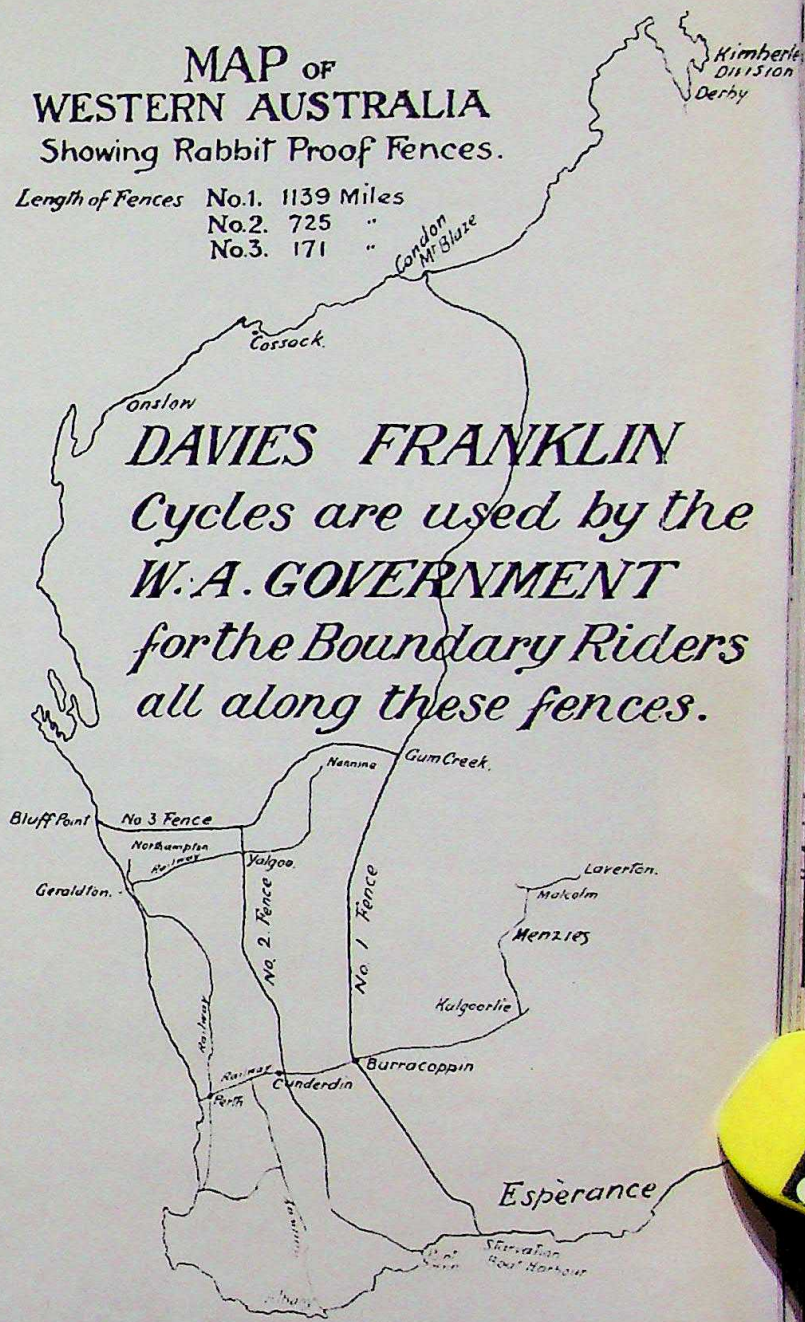
as the heyday of bush cycling. If not spectacular, it pervasive.

ost urban Australians were ignorant of the nature and nt of rural bicycle use. A classic example is provided report in the *Cycling Times*, published in Melbourne 896. The Australian writer reported upon a London cation, *Pearson's Weekly*, which had recently com- ted upon the use of bicycles by kangaroo shooters. London journal had referred to several thousand als being shot, and the 'noiseless approach' the hine afforded. The Australian writer invited his readers ote the 'unlimited stock of reliable information about gs that never happen' that *Pearson's Weekly* provided English readers. He informed his own readers that s at once obvious that the [English] writer knows ing about kangaroos, or the speed at which they el], nothing about Australian "country" and nothing ut cycling'. In fact, that statement was most appropriate he Australian writer himself; the bicycle was in fact d by occasional kangaroo shooters into the early 1930s. y specifically referred to the machine's quietness, nomy, and ability to cover extensive areas quickly le operating out of a base camp. Skins were carried k to camp on the rear carrier and handlebars, and frame served as a stationary platform while shooting.

y the turn of the century the use of the bicycle by mmercial travellers had occurred in some very isolated as. In May, 1899, for example, a Western Australian k buyer from Esperance shipped to Eucla and pedalled nine hundred kilometres back to Esperance, buying ep on the way. In Orange, New South Wales, the cle was still being used by insurance agents as late the 1930s. The cost and upkeep of a motor vehicle horse was prohibitive at the time, and the bicycle wed the agents to devote much more time to can- sing for new business than when restricted to train edules and walking. Earlier in the century a noted nge (N.S.W.) insurance agent, 'A.M.P.' Carr, occasion- pedalled a nine hundred kilometre circuit encom- sing Condobolin and Cobar. He was sometimes mpanied by a doctor who carried out the medical mination of those applying for life insurance policies.

uring the Depression years the bicycle was used by abbit inspector in the Western Australian wheat belt. camped at a central location and spent two or three s cycling about adjacent properties. One important antage in using the machine was that it saved petrol, and maintenance expenses on his car, for which he a limited budget. Also the bicycle was well suited to actual process of inspection. He could readily lift the hine over fences between paddocks or neighbouring perties, and could carry it across rough areas and ercourses that would have been impassable by car. eliminating the restrictions imposed by roads, fences gates he was able to reduce much duplicate travel. ed on his machine he could also have a close look



Map of Western Australian rabbit-proof fences, with advertisement. (Department of Agriculture, W.A.).

without the nuisance entailed in continually getting in and out of a motor car. The result was that by bicycle he could generally cover more ground more thoroughly in a given area, and inspect portions of properties which he might not otherwise have readily visited, than if he had relied upon a car for the entire task.

An excellent example of an institutionalised use of the bicycle to meet a specialised rural need was the patrolling of the Western Australian rabbit fence network, three thousand and two hundred kilometres long, by boundary riders on bicycles. The earliest known reference to the possible use of the machine along the fence was testimony given at the Royal Commission of Inquiry into the Rabbit Question, held in Perth in March 1901. All

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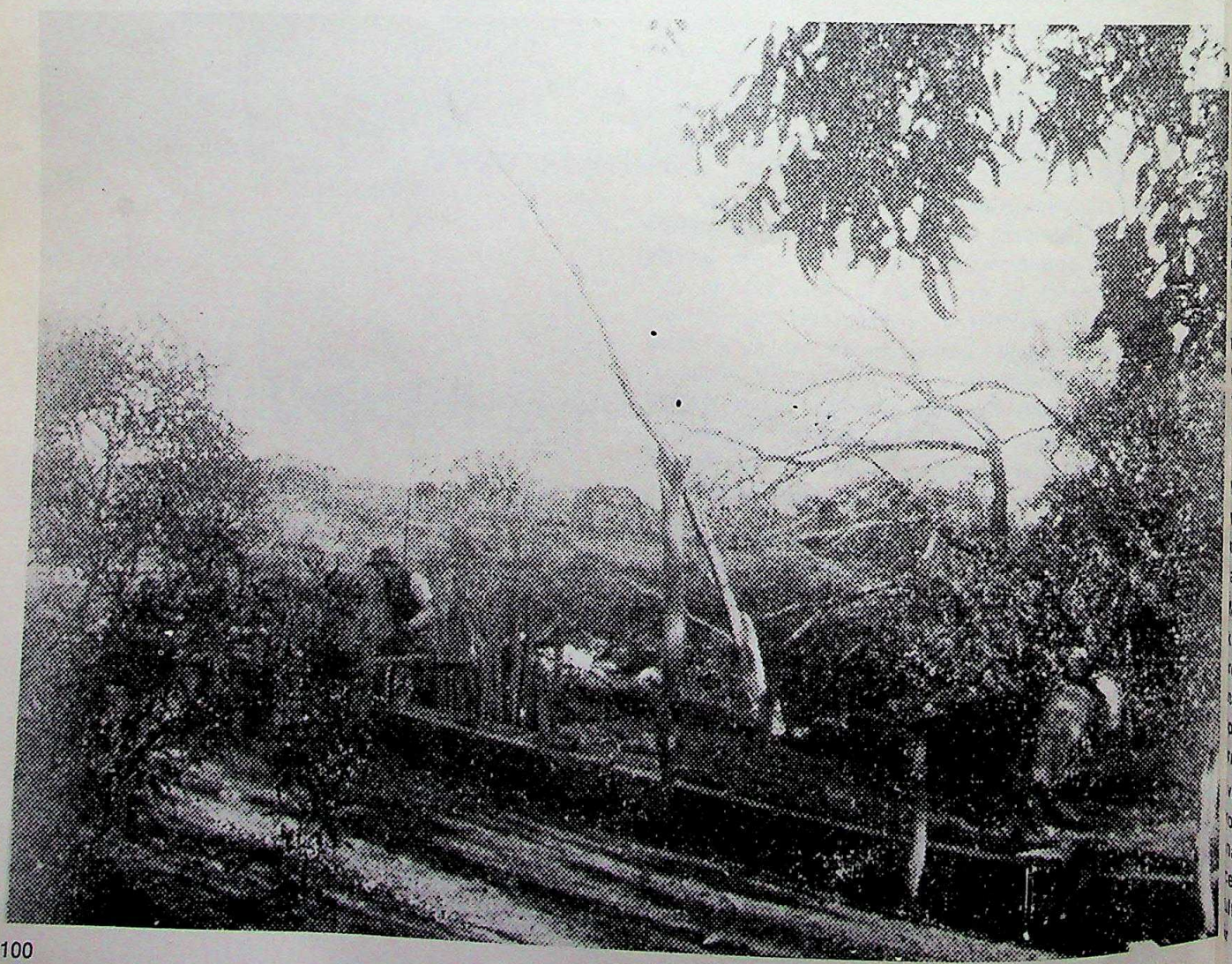

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ng: Conditions along one of the fences in 1908; horses and buggy carry repair materials, and a maintenance man draws water n a well by an age-old method. (Department of Agriculture, W.A.). This page: Above, Ernie Frandsen, showing the bicycle he d for kangaroo hunting and the cart for taking the skins back to Dandaraga Station, W.A., about 1930. (Photograph courtesy Lenn Witt). Below, Ted Creasey (left) with a fellow-worker on the Kalgoorlie pipeline, about 1950. (Courtesy Ted Creasey).

lesses interviewed about fence patrols agreed that cles would be preferable to horses or camels. In icular the speed of the cyclist was noted by the al Commission. It was hoped that it would minimise number of boundary riders required along the fence, eby decreasing wage costs. Also, the bicycle cost less l a horse or camel and maintenance was relatively pensive when compared with feed being brought in animals.

lost important initially, however, was the fact that a of drinking water restricted the use of animals. A city of feed resulting from seasonal or general drought ibly played a role as well. Consequently, in 1902 the otion of bicycles was specifically suggested as an rnative; by 1904 the machines were in regular use.

vidence suggests that camels were not used by fence ols until 1905. Although the camel's ability to survive native vegetation was a definite asset for working the e, its willingness to eat poisonous plants as well ulted in the death of many of the animals and inhibited r début because the need to supervise their feeding

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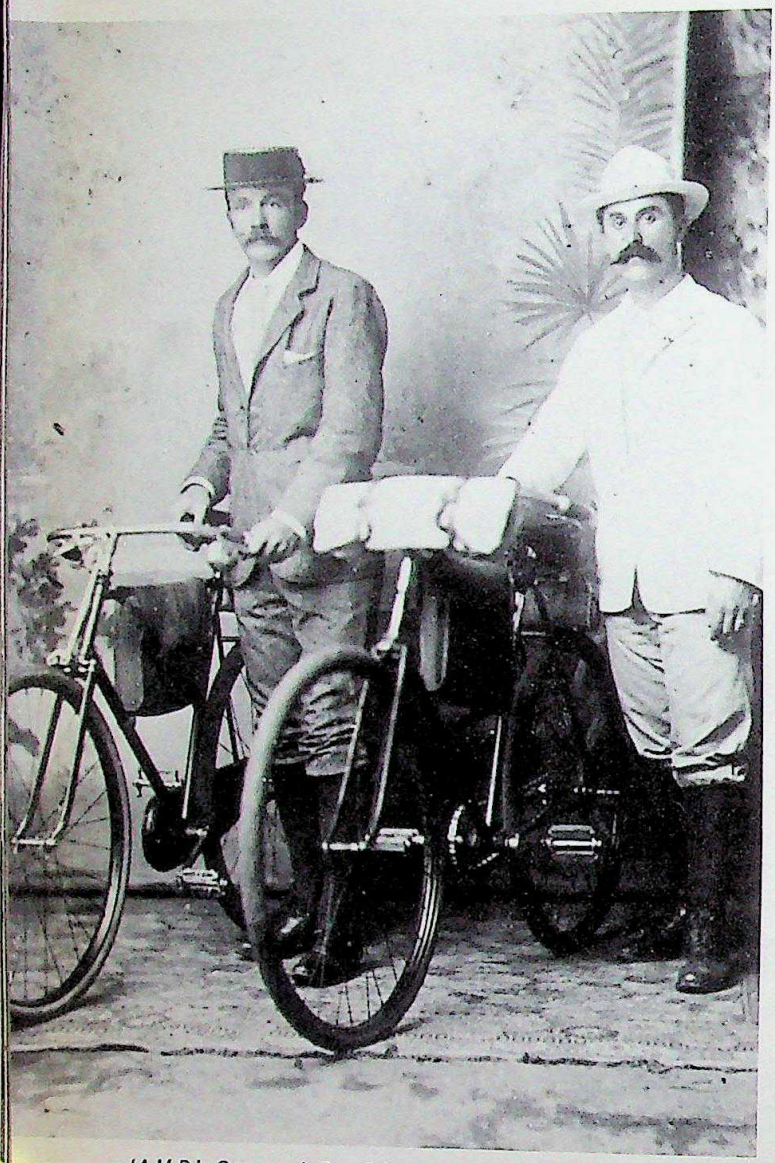

'A.M.P.' Carr and Dr. Cribb. A studio shot of the insurance man and the examining doctor, taken in Dubbo, N.S.W., probably early this century. (Photograph courtesy A. Carr).

A boundary rider, 1908, who worked on the W.A. fences. (Department of Agriculture, W.A.).

habits constantly was troublesome. Even after camels were introduced, bicycles continued to be relied upon for patrol work in areas with a heavy concentration of poisonous plants; in later years bicycles replaced some established camel patrols where there were problems with plants.

Another factor that may have delayed the camel's introduction, and certainly affected the nature of its subsequent use, was that the 'original plan of examining the fence from the top of a camel was never satisfactory and camels soon became fractious at being compelled to go down so frequently to allow proper inspection to be made'. In this regard bicycles were superior in that riders could lean down without dismounting.

Little is known about the bicycles used along the fence. No comments were made in departmental reports about such matters as reliability, maintenance, and tyre wear and puncture resistance. However, this very fact, in conjunction with the length of time they were used, probably means that there were relatively few problems; certainly there would appear to be no reason why there should have been.

A problem that plagued the Rabbit Department and had direct consequences for the cyclists was illegal traffic along the fence. (Permission was rarely granted for anyone to travel the fence reserve because the animals and vehicles tore holes in the wire and knocked down or bent the posts). Rough surfaces were created by vehicle wheels, animals drawing them, and cattle plodding along the fence. In some areas the track was 'so cut up with ruts that it is almost impossible for the boundary riders to ride bicycles on it and keep an eye on the fence'.

In 1910 in the Barrambie area continuous surreptitious wood-carting traffic left the surface so rough that camel carts had to replace the cycle patrols. People travelling the fence also took water from the tanks, mentioned as a particular problem for bicycle-mounted riders because of the limited water supply they carried.

There are no references as to specifically when and why the use of bicycles along the fence ceased. Evidence

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ts to the fact that bicycles were retired from service ng the first world war as a result of a forced change maintenance logistics. For patrolling the fence as uently as possible with a minimum of riders the cle, except in heavy sand, was the best mount. ever, while a cyclist could cover long distances kly, he was limited in the amount of equipment he carry and consequently the extent of the repairs could undertake. He depended upon a back-up crew major repairs and a supply wagon to keep his food other supplies stocked at storage points along the e.

ith gradual cutbacks in fence patrol expenditures over eriod of years and the sudden loss of the majority of staff when Australia entered the war, the situation nged radically; with only a few men, the logistics had be re-organised. Each section was patrolled less uently and individual riders were relied upon to ertake repair work that previously was done by gangs. camel cart was adopted for all riders; only by this ns could they carry posts, netting, food, water and r supplies. The bicycle, in these circumstances, was longer a viable alternative.

he bicycle was also used by the patrols along most the Kalgoorlie pipeline, five hundred and sixty kilo- res long, for about six decades. The pipe was for y years of wood, with lead-caulked joints. Contrac- and expansion in the extremes of heat and cold lted in frequent leaks developing; it was necessary patrol the entire line daily to plug them. A rider carried king tools, shovel, lead and food on the bicycle and about twenty-four kilometres of the line both ways h day. In addition to plugging the leaks (or notifying section office for assistance in the case of large blowouts) he had to keep the pipeline route cleared lant growth and maintain his bicycle pad. The high of work to travel was such that the bicycle was far erior to a truck in terms of convenience and cost. bicyclists were replaced by motor vehicle patrols rally only after the welded steel pipes replaced the e traffic-prone wooden ones. The last bicycle mounted pipe- 'lengthrunner' dismounted in the early 1960s.

he decline in the use of the bicycle throughout rural ralia began after the end of the first world war. ugh drought, for example, resulted in an occasional rgence of the machine's use for mustering, and the ression forced many back to the cheap transportation it ded, by the time of the second world war its general by most rural workers and travellers had essentially d. The increasing availability of the motor vehicle shadowed the end of the bicycle for most travellers. 1923 Australians owned more motor vehicles than all five other countries in the world.

1930, on a per capita basis, only Americans and Zealanders exceeded Australian ownership. Aus- ans adopted the car because it was affordable, fast, carry large loads, was comfortable, offered pro-

The Reverend Thomas Trestrail, a Kalgoorlie minister, about 1895. (Courtesy Stanley Trestrail).

tection from the elements, and required little effort on the driver's part. However, in the process the roads became progressively more dangerous for those who wished to continue cycling. As well, as motorisation became a status symbol, many, especially in commercial circles, were forced to 'keep up with the Joneses'. The bicycle, like chopping up wood, required time and energy; in an increasingly fast-paced society that spelled the end for both. Until then, however, the bicycle proved to be a superb personal transport device for workers and travellers for many decades throughout rural Australia. The nature and extent of that use appears to have been unique.

The author, a former post-graduate student at the Australian National University, Canberra, has written a Ph.D. thesis on the use of the bicycle in Australia, and is publishing a book on the subject. See Hemisphere, *June 1978, for his article on the decades when Australian shearers cycled thousands of miles each year to work.*

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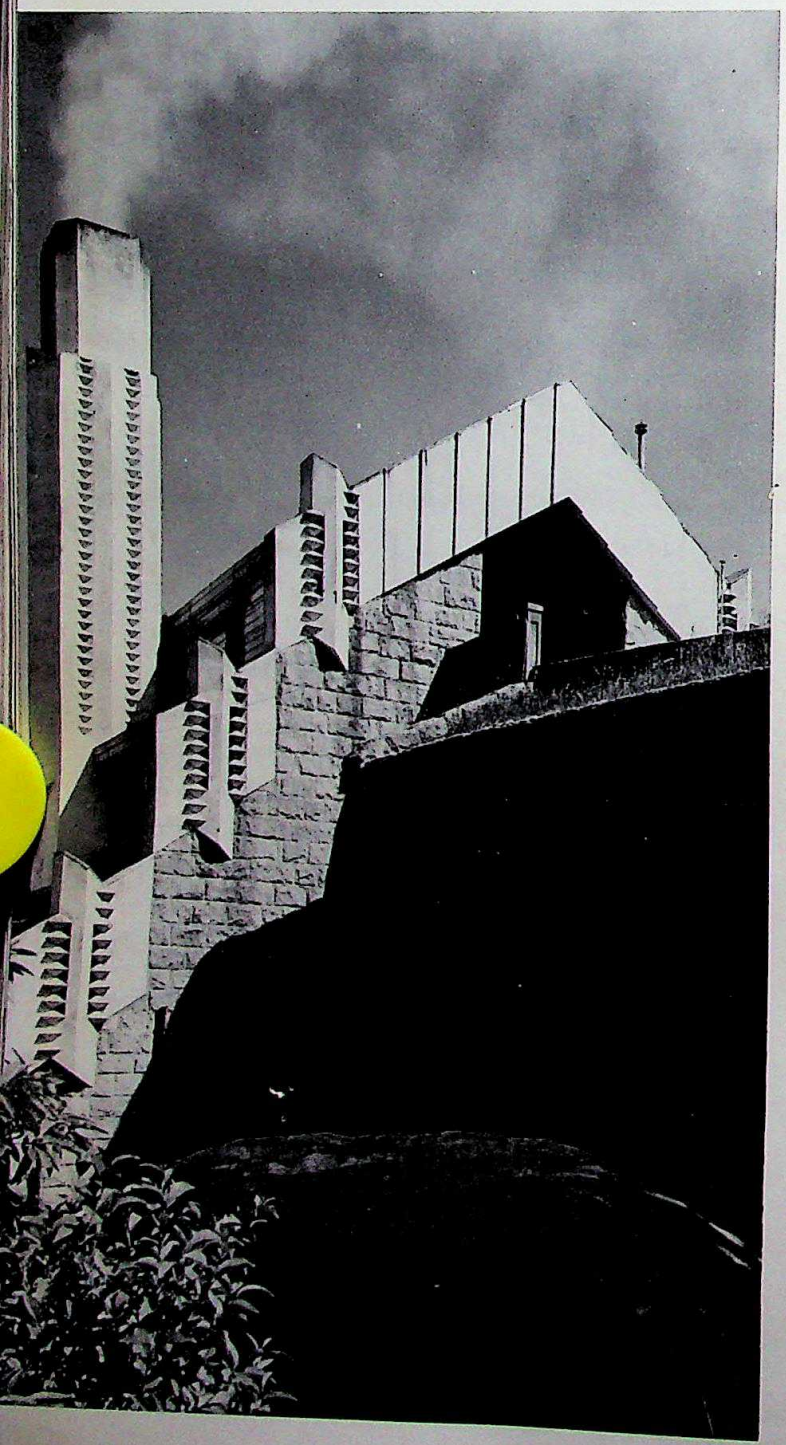
A MAN AND A LAKE



AUSTRALIA has had a number of fine architects: the earliest was Francis Greenway, a former convict who gave a semblance of dignity to early Sydney and its surrounding townships, though one should not forget the bush architects, whose natural skills in using what timber and other materials were available were as much exercised as those of the Peruvians in using *adobe* bricks for animal compounds and shelters. Neither should Horbury Hunt be left off the list — the man who continued the grander European tradition of building, another version of which had earlier been brought here in the form of graceful Georgian or Queen Anne houses surrounded by tasteful verandas. Unfortunately, most of the finer works of these and other innovators has been swamped by banality.

Such is the case with Walter Burley Griffin, the American who first offended his colleagues in Australia by winning an international contest for the design of Australia's new capital, announced in 1911 — a design that since has lost its grandeur of concept by what is euphemistically called 'ribbon development', a reversion to the old system of stringing roads out across the countryside and hanging suburbs, lonely and lost, on to them.

Without Griffin, Canberra would never have had the concept of the Parliamentary Triangle, a sensible concentration of legislature and administration leavened now by a High Court and a National Gallery in building; who would have dared of suggesting an artificial lake to give the city some landscaping break; who would have laid down the idea, lately somewhat eroded, of the sight of green from any part of the coming city?

Griffin had worked with the great Frank Lloyd Wright, one of the United States' pioneers in imaginative dwelling design, to whose work Griffin contributed one may believe from reading this book named after the architect-designer (MacMillan, ISBN 0 333 22928 2) by Donald Leslie Johnson of Flinders University in South Australia. But, according to the author, Griffin was interested in the emphasis on function placed by the Chicago architect, Louis Sullivan, whose work so much impressed contemporary Europeans.

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One house designed for the Pratten family at Pymble, a Sydney suburb, by Walter Burley Griffin. Opposite, one of the architect's many incinerators. This one, at Willoughby, near Sydney Harbour, is to become a restaurant. (Both photos by Max Dupain).

Griffin's early days of association with the then ten-year-old Federal Government structure of Australia were unfortunate, as his terms of reference were not clearly laid down (to put it briefly) and he was faced with a disgruntled bunch of people whose noses were out of joint, and to whom he was supposed to give orders and from whom to expect loyalty. A Royal Commission lightened things out somewhat, but, to be fair to the burgeoning architectural establishment of Australia, Griffin's own obligation to return to the States to finish his contract meant that things would have been muddled anyway.

Later, Griffin was to find satisfaction in building private houses in Melbourne, many of which still stand, and in designing towns (owing something to the master design for Canberra) in the Murrumbidgee Irrigation Area in New South Wales, two of which, at Leeton and Griffith, were partly carried out. So was some work at St. Kilda, Melbourne, and the impressive Catholic Newman College at Melbourne University, too early (1915) for its critics. At least it was put up and still stands; Sydney University threw out his design for a campus there.

But 'his testament', as Donald Leslie Johnson says, is Castlecrag, the perfectly conceived little suburb, in a setting of natural trees, overlooking a peaceful part of Sydney Harbour, which was built in the 1920s. There, he could enjoy working with stone and concrete and glass and space. (*Hemisphere,* April 1976).

In the thirties was to come a spell in India, where he created nothing on the grand scale, but did some smaller public buildings and private houses.

Nothing was too large or too small for this man of genius —of lesser genius, perhaps, but an inventive one. He showed the same imagination in designing a worker's cottage of the utmost simplicity for Canberra, as in his houses for himself and his wife in Melbourne and Castlecrag. There is the imposing simplicity of the Pratten houses in Pymble, New South Wales, reminiscent of those he had done earlier in the States, and the enormous incinerators, for many years no longer used for their original purposes, in Sydney, Melbourne and South Australia. And on top of all these exercises in almost Japanese simplicity, the utter and delightful nonsense of the twentieth-century baroque of the walls and ceiling of Melbourne's Capitol Theatre.

ANDREW KENNEDY.

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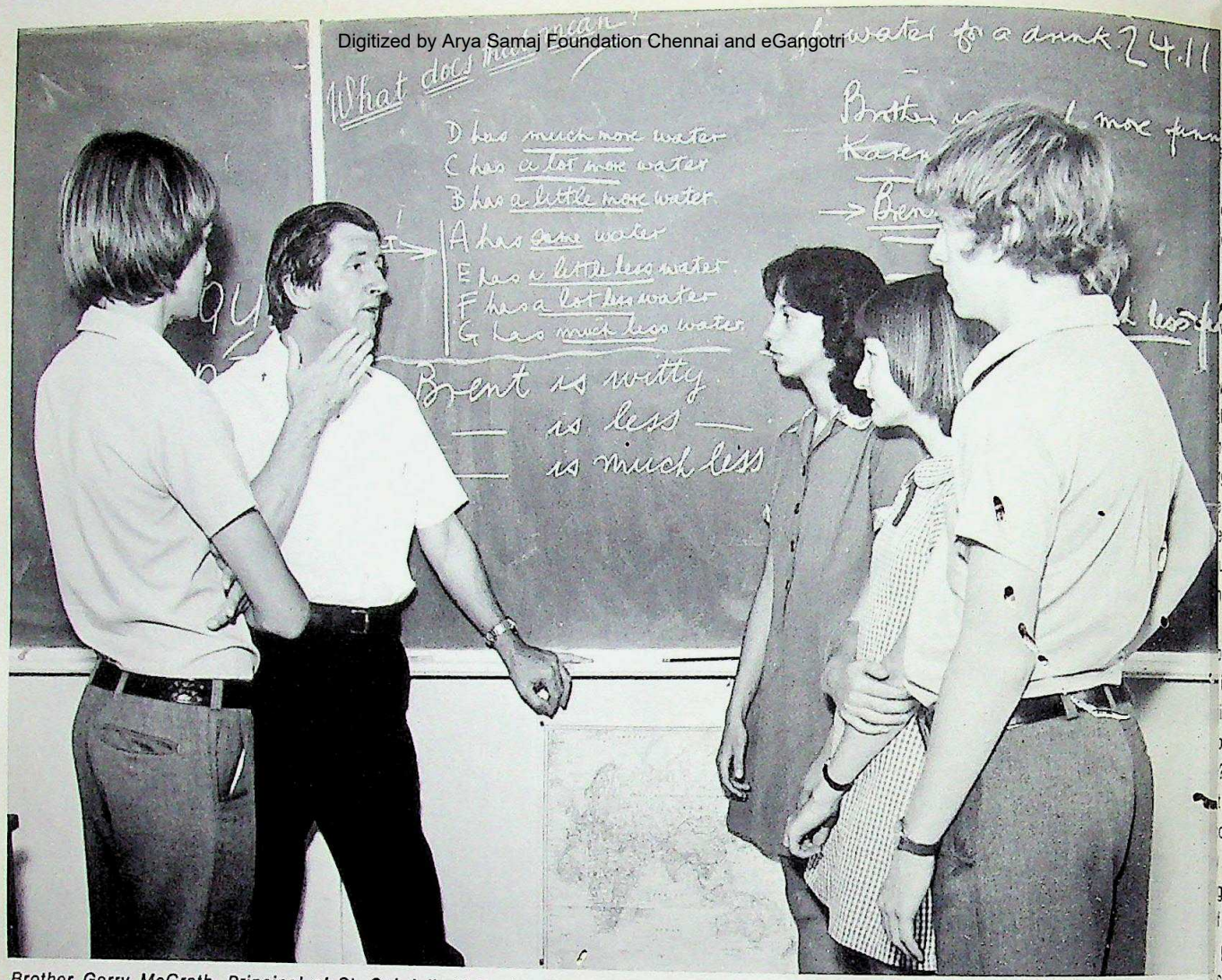

Brother Gerry McGrath, Principal of St. Gabriel's School, where he has taught for twenty-eight years. (Photograph by Bob MacColl, A.I.S.).

'. . . hear, know and say . . .'

In some hills north-west of Sydney is an old brick building that houses one of the newest methods of teaching the deaf to 'hear' being practised in the world. The school in which the new 'cued speech' method is being taught to youngsters is run by the Roman Catholic order of De La Salle. The day *Hemisphere* went to make the interview which follows was the first day of school, and deceptively peaceful.

Sitting in on one of the lessons with Brother Gerry McGrath with the three girls and a couple of boys in the thirteen-year age group was itself a lesson in understanding and patience on the part of the youngsters and their teacher, for the youngsters, suffering from extreme hearing deprivation, have to imitate speech as best they can, but the look of pleasure when an answer is right shows that the method is working for them.— Editor.

How do you begin to communicate with deaf youngsters?

Well—when I see young parents who have just had their children diagnosed as being deaf, the most important thing I ask them to appreciate is that there is a remnant of hearing there that can be used. No matter how small that remnant may be, it is possible—there is a very small percentage of totally deaf children—it is possible for that residual hearing there to be used, even if it is only getting the melody. How shall I explain? You know that in a song we have the melody and the lyric; we have the same in our speech: we have the melody of our speech which indicates its pitch—whether it's high or low, loud or soft, and whether it's a long sound like 'ah' or a broader one as in 'banana' or something, and the 'lyric' is the words we use.

Therefore, we insist that the parents talk and sing to the child so that the child could verbalise at about age four. We'd want that child to be able to say to himself 'I gather from the way people around me have been communicating with me that I am expected to listen to

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they're saying and not to see from the lips what they aying.'

practice this may not work out, but it kind of orients directs the mother's teaching and the mother's com- cation and the family's communication with the baby: are going to talk to it, irrespective of whether or not looking up at the mother's face. I have found with very young ones, playing round with them on the when they first come, in a fifteen-minute play period, would estimate the amount of time they spend looking your mouth at the most would be ten seconds.

d yet you think you're still communicating with the gsters?

s, because at least they're listening to the human e, they're appreciating, possibly, the melody of the uage, and consequently they hear at least the melody at voice although we have much higher expectations they will get an appreciation of more than just the dy. We can expect that melody to come out eventu- in their speech, if the speech teaching is of good ity.

that it will run on more or less as we are talking ?

least with that melody, yes. But the pronunciation, ourse, is another problem again. This has to be taught slowly and yet, compared with our hearing loss, of ght, say, the children's is much greater: the profoundly would be at ninety-five, a hundred, a hundred and plus. So that, apart from the melody of the speech ch they can hear, you expect them to hear many of vowel sounds of speech also, because the vowels in a fairly low frequency area, and in hearing the els, because hearing is the preferred mode of getting rmation, we use as much of that as we can. Now, ause they have such a severe loss we have to supple- t that audition with reliable visual information. And s where our technique of 'cued speech' comes into picture.

w does 'cued speech' differ from sign language?

ere, we use cued speech only, and it's distinguishable sign language—the manual alphabet of other deaf ple—insofar as a cue has to be read with the move- ts of the lips or it has no meaning. A sign can convey ning on its own, independently of whether you speak move your lips at all.

ould you say, then, that cued speech — those brief ements you were making in class this morning — is nd language shorthand?

o it has nothing to do with sign language. It is diffi- to get this across, because it does look manual. the cue does not convey meaning on its own, only ssociation with the movements of the lips. This is t makes it so very different from sign language, which convey meaning solely on its own.

ow exactly does cueing help?

et's put it this way. If every sound in the English uage looked different on the lips to every other sound, hearing-impaired child could be expected to learn

Brother Reg Shepherd, Deputy Principal, and a member of the staff of the school for twenty-nine years, discusses games programs with pupils. Mrs. Clare Hopley with Scott Barnes during a lesson filmed by Mrs. Bev Murray for later use. (Bob MacColl).

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Miss Margaret Donnelly at work with her middle primary class. (Bob MacColl).

that language much as a hearing child does, and if every sound looked different from every other one, a child could be expected not only to learn but also to speak—to be able to imitate that model it was being given. But we know that the English language is very, very ambiguous as translated by lip movements. You know, the simple words, 'big', 'pig', 'pink', and 'pick' look the same on the lips. You might be able to get fifty per cent from the lips alone. If two words look the same on the lips the cue will distinguish them, so if I use two words like 'cup' and 'come' which look exactly the same, and cue those two words while I'm saying them, they will lose that ambiguity. Cued speech completely rids the English language of ambiguity when people are lip-reading it.

It looks like a major achievement.

It's an incredible achievement. You see, what we're asking a hearing-impaired child to do at the age of eighteen months — or the age of two or three — we're asking the child to lip-read a language it doesn't know. You can imagine what it would be like for an Australian to try to pick up Indonesian or another language with the teacher on the other side of a one-way glass and he says 'Say after me . . .' and you can hear nothing of the new speech. So that a hearing-impaired child has two problems when it's trying to say a word: what it's aiming to say and how to say it. If I go into a class and introduce you: 'This is Mr. Henderson', and they try to repeat that name: exactly what they are *aiming* to say is 'Henderson' or 'Hinterton' or whatever it may be, and then *how* to say it. Cued speech completely eliminates, in the mind of a hearing-impaired child, what he or she is aiming to say. How he says it has nothing to do with cued speech; it depends on how well he is being taught speech.

How much preliminary work did you do on cued speech?

I went on a world study tour in 1967 and it was only the year before that that Dr. Cornett as Vice-President for long-term planning had been moved into the only university for the deaf in the world, in Washington, D.C., which is called Gallaudet. Dr. Orin Cornett saw the War of the Roses that there was between the manualists and the others. He saw that both had the same idea in mind. Actually, he was a mathematician and a physicist; he applied his expert knowledge of those fields to the spoken form of English, and devised the system of designating the exact sound made by the lips by using four positions of the hand to indicate vowel sounds and eight variations of the positions of the fingers (finger configurations, in technical terms) to cover all consonant sounds.

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Mrs. Irene Truscott with one of the younger pupils, Phillip Andrews. (Bob MacColl).

o you brought much of his method back from the
es?

es, cued speech we did, and at St. Gabriel's, we
neered that out here in 1968.

s this the only school using it?

, there is a pre-school program up in Queensland,
chool at Portsea, south of Melbourne, in Victoria, a
ate school in Perth, and it's being used in a couple
lasses in Adelaide, but nowhere the number of places
eserves to be used. And when the alternative, oral
hing or lip-reading, began to fail, the option that was
sen, instead of improving the situation and showing a
nger belief in oral teaching, was what I consider a
ession to what used to be called a combined method;
now called total communication. There are strong
ocates for this total communication, which began in
United States. It does seem a pity, with improved
hology, in earlier diagnosis, in more informed parents,
etter techniques of teaching language, there should
movement back to something that was very much akin
hat we used a long time ago. It's a new name for an
game.

n the question of teaching a second language to the deaf: surely this poses tremendous problems?

Yes. I'm sure we were the first school in Australia to begin using second-language techniques, and would be the first school in the world to use a particular method, which is the Tait Oral English technique. There are plenty of theories, but I believe that the only proof of the efficacy of a method is in the results that you are getting. We began this five years ago and the results coming through over the last three years are nothing less than dramatic.

Gloria Tait worked up in the Pacific Islands for about twenty-three years, teaching English to children up there, under the South Pacific Commission. She got these ideas together over that period and finally put them into a book and ended up with fifteen oral-teaching books and readers that follow on from them.

She works on the basis of this idea: that if all migrant children came out to Australia in their early, sensitive years, when children acquire language, there would be no need for a migrant education program; but the youngsters don't come out in those years: they come out when they're past, and consequently have to turn round and learn the organisation and rules of this incredibly complex English language. I went to a talk given by

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Two migrant youngsters, Nicola and Maria Scarcella, use sign language to converse in English, their second language, during a course in Canberra. (A.I.S.).

George Pitman who is an expert in the teaching of a second language. He had started out as a teacher of non-English languages, and later moved up to the Pacific Islands and worked with Gloria Tait up there and then he was at Sydney and Macquarie Universities lecturing on the Diploma Course for Teaching English as a Second Language.

There is a peculiarity about English, and this is how we can identify why hearing-impaired children and migrants face the same problem: English is a stress-time language. When we say the word 'generally', it's got the accent on the first syllable (— . .); in French, the word would be *généralement*. French is a syllable-timed language, so the stress is equal on all four syllables. The English, being stress-timed, has this peculiar problem about it, that the unstressed parts of the language carry the most important meaning in the sentence. That is why migrants don't hear them and the deaf don't see them on the lips. I give an example, quoted by George Pitman. There was a doctor up in Samoa and his car was playing up and he went along to the garage and said to the mechanic: 'This car's playing up; I've checked the battery, I've checked the spark-plugs, the water, and I'll pick it up after school.' When he went back after school, the mechanic said: 'Doctor, I've checked the battery, the spark-plugs, the water, and the car is OK.' What the mechanic hadn't heard was the 'I've checked the battery I've checked the spark-plugs and the water . . .' He heard only 'check the battery, check the spark-plugs . . .' So the unstressed parts of that sentence were unheard. Another classical example happened in a school where I was when a fifteen-year-old Greek girl came into the class and the teacher said: 'Maria, you shouldn't have come in now.' 'I did.' 'You shouldn't have come, Maria.' And she looked across at me, whom she'd never met before, for some support. The teacher was asking that girl to hear the sound *n't*. The unstressed part carried all the meaning. All these little parts of the language like 'us' and 'the' and the little prepositions are unstressed. I say to you: 'I'll meet you at the airport at six o'clock.' Now, is it *in* the airport, *outside,* or *where*? The unstressed part tells you where we're going to meet. The deaf really have a severe problem in trying to lip-read them.

We are counteracting that problem in having reliable communication, but if you learned to cue, you could go into that senior class where you were this morning and have reliable communication but you couldn't teach them language, because that's another task in itself.

Couldn't you get over it by using the full 'not'?

But no-one says it, among the people they would be meeting—perhaps one in every thousand of the people

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he hearing society around them. The problem really es from the Normans going across to Britain and ing it all when we got the double language, so that ead of saying, in Anglo-Saxon, 'I think I'll pick up the ir, carry it over there and put it down', the Normans ld say 'I'll elevate the chair, transport it and deposit The Norman language is the one used in all secondary books, and everything that's written — well, almost — the Norman form.

etting back to cued speech. In other parts of the ld, how much is the method practised?

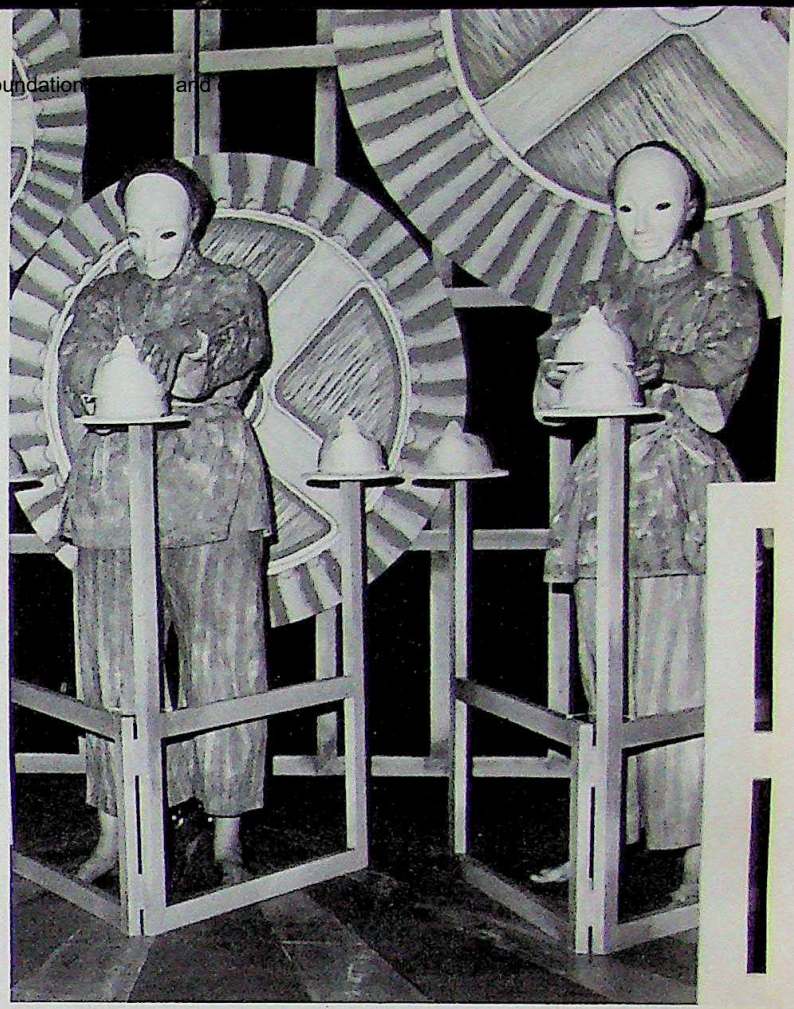
Well, we've sent over samples of our language to Gill University in Canada, where the very famous Dan and Dr. Nan Ling work (she's Scottish and he's lish) and Dan Ling came here for a month last July. 've had much feedback from them over there of sur- se and wonderment, really, because it does not typify language of most surveys of deaf children's language t have been done in recent times. Most of it is a gled, confused web of a dialect that is not the English guage. Our aim is the word-order of the English guage: that's our target language. If that's not your get language and you want the language of the deaf, n you might as well go ahead and achieve it; but we n't believe that's fair enough.

At what age do you think deaf youngsters should be ght?

The best example I can give you is the most recent one. ad a phone call the other day from a very distraught ng woman who has a four-year-old son and the ghter sixteen months old; a month ago they found t the little girl has a very profound hearing loss. I went that night. The first thing I told her was not to stop king and singing and holding that child close. So that m diagnosis onwards is the right time. And the usual e of diagnosis, according to a specialist a couple of rs ago is two-and-a-half to three. This is terribly late: t have gives them only a couple of years to learn the ge without hearing it — a process that takes a child five years. That child goes to school without any effort on his part, with a good sp of the mother-tongue without ever having been ght — solely by being communicated with. Our chil- n spend those twelve and thirteen years at school, really going to school, but spending the time ng to learn the language that the other children learnt re they began formal learning. If you can get them ly enough, you may be able to avoid having to teach m the rules of the language as a second language. past those sensitive years, then you have to teach m their mother-tongue as a second language.

The title is from a poem by Rupert Brooke, 'Not With m Tears':

earn all we lacked before; hear, know and say . . .
nd see, no longer blinded by our eyes.



A scene from Five Flights to Freedom, *a play put on by the New South Wales Theatre of the Deaf (Photograph courtesy Australian Elizabethan Theatre Trust); Peter Pascoe, his hearing impaired by a motor-cycle accident, follows a telephone conversation through vibrations transmitted to his fingertips by the apparatus attached to the phone. (Photograph, Commonwealth Department of Health).*

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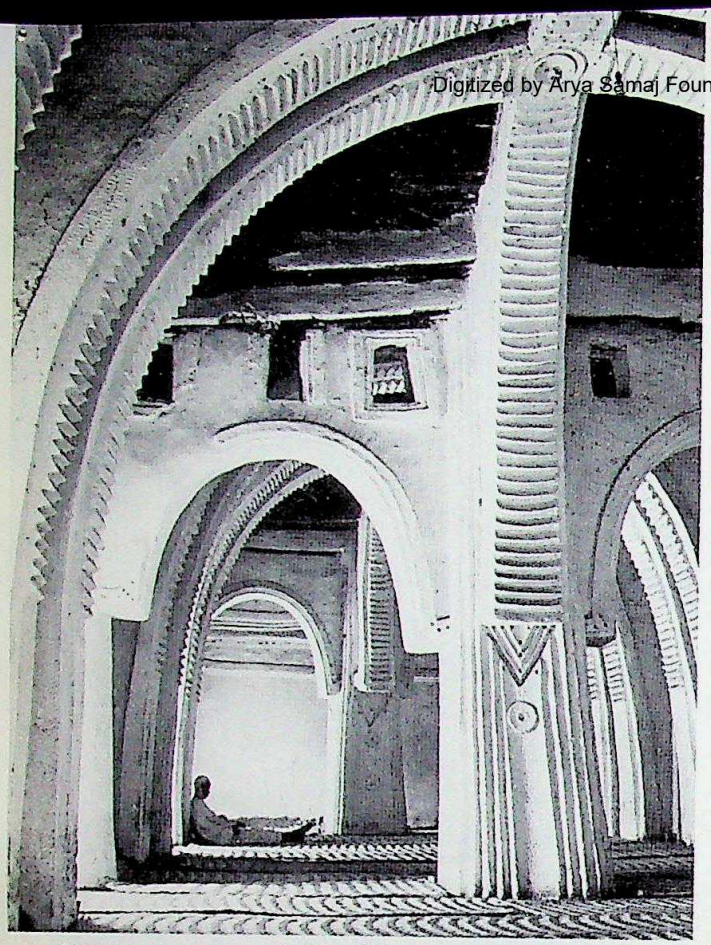
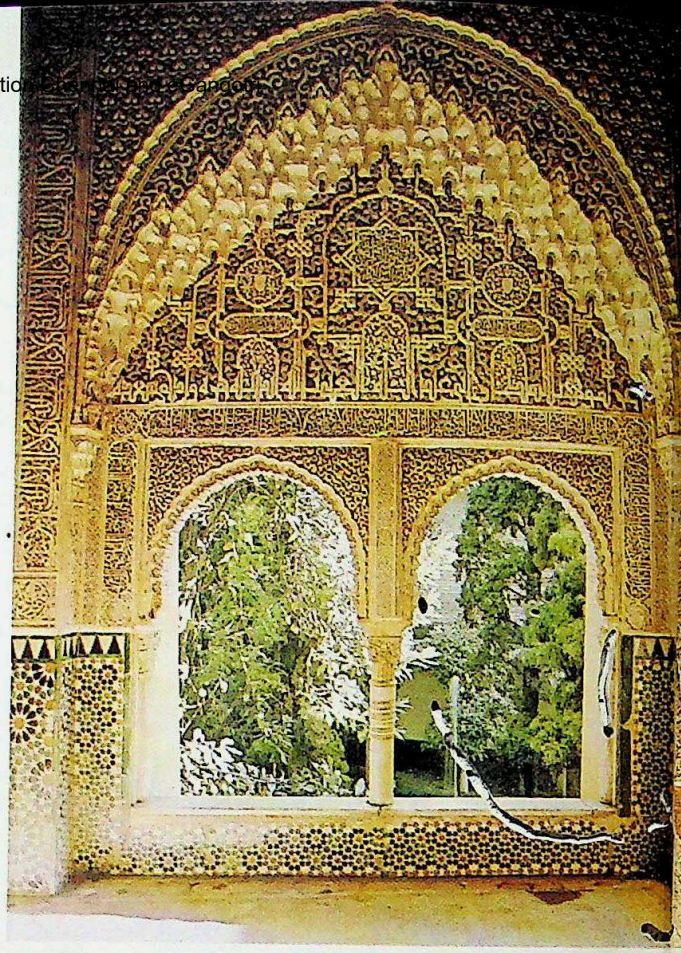


Above, a mosque at Travnick, Northern Nigeria, 'directly related to the indigenous dwellings of the area'. Below, the caravanserai at Isfahan, Iran, converted, after two hundred and fifty years, into a sumptuous modern hotel.



A window of the Alhambra, in the Spanish city of Granada — the palace which was the residence of the Moorish kings. The light reflects upwards on to the muqarnas *(stalactite) vault.*

BUILDINGS OF ISLAM

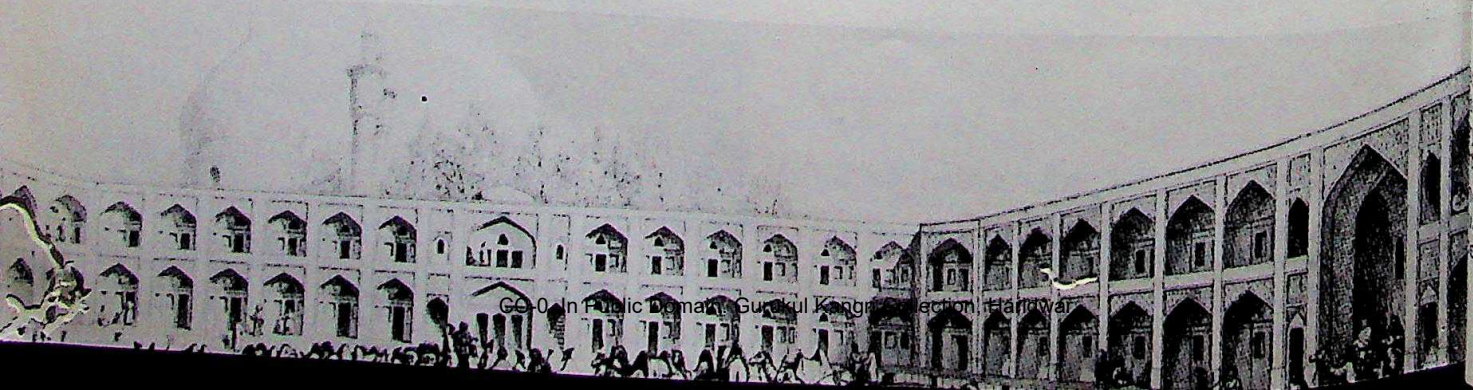
LIKE all sensible editors, George Michell has brought together a group of experts to write on different aspects of Islamic architecture, confining his own knowledgeable offering to a single-page Preface and contributions on North Africa and Sicily, and The Far East, in *Architecture of the Islamic World* (Thames and Hudson, ISBN 0 500 34076 5).

The book, of nearly three hundred pages, is monumental, richly illustrated in colour and black and white, with (indispensible in a book on this subject) plenty of line drawings and sketches: there are nearly nine hundred illustrations in all.

Himself an expert, as Co-Ordinator of Studies in Oriental Architecture at the Architectural Association in London and Editor of the distinguished *Art and Archaeology Research Papers,* George Michell, an Australian living in London, has divided the book into two parts. The first is a series of essays on seven aspects of Islamic architecture, the titles including *What is Islamic Architecture?* by the Professor of Islamic Art at the Universities of Venice and Padua; *The Architecture of Power,* by the Professor of Fine Arts at Harvard; *The Elements of Decoration,* by Dalu Jones, George Michell's co-editor on AARP; *Trade and Travel, Materials and Techniques* and *The House and Society.*

The second part is made up of what promises to be one of the most useful reference works on outstanding Islamic monuments: a small encyclopaedia, fully illustrated, with notes on each. The result is, in the first part, a thoroughly readable series of short monographs that provide an introduction to the newcomer, additional material to the informed, and, in the second, a detailed *vademecum* of major monuments of an architecture that stretches from Spain through south central Europe and Africa, via Asia Minor and the Middle East, Arabia, Iran and Iraq to the Indian sub-continent and as far as China.

The book parallels this vast sweep of Islamic culture. The caravanserais built to serve those on the pilgrimage to Mecca as well as the merchants; the mosques built to the glory of God, whether in the form of the more massive



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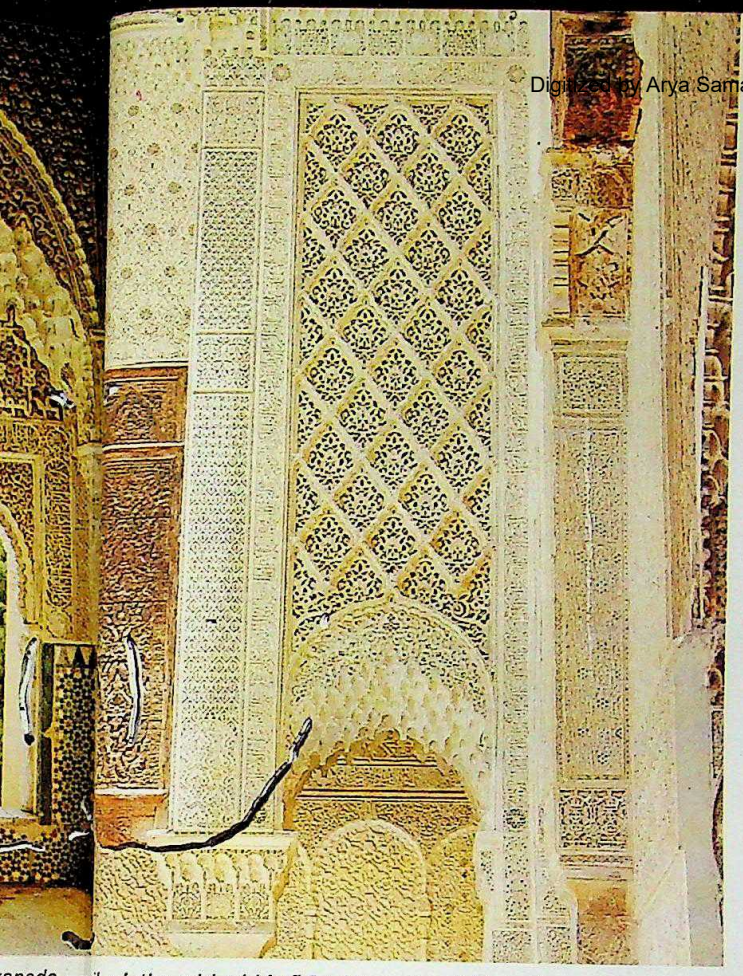
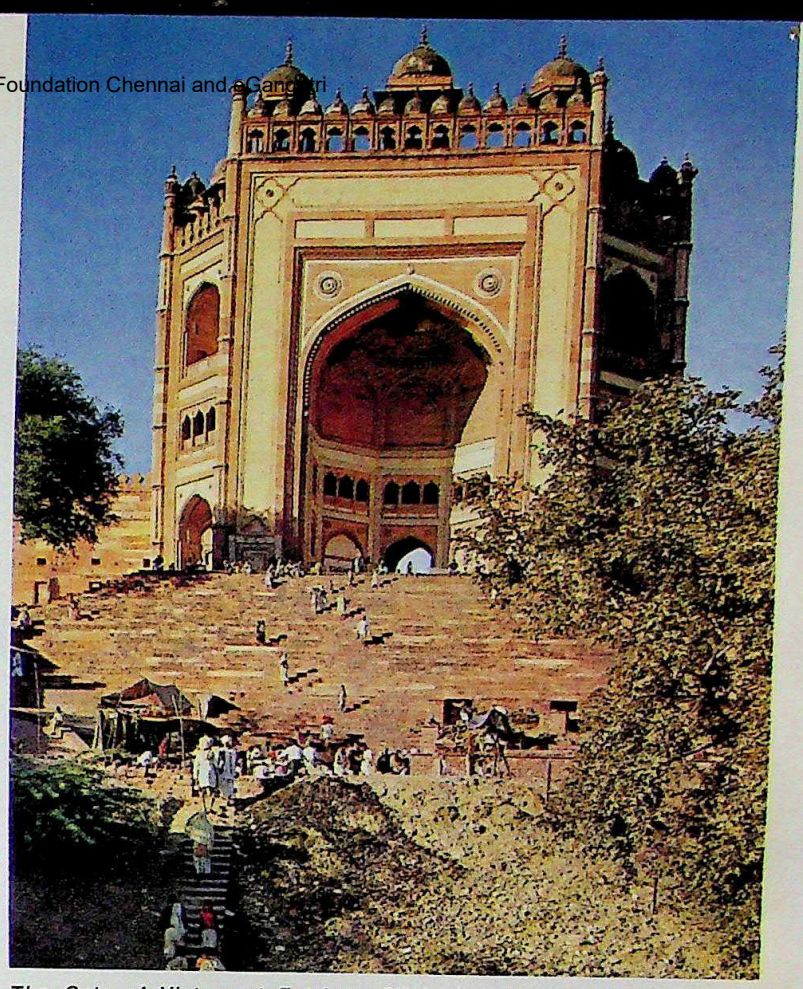


anada — sh kings. ite) vault.

il of the old al-'Attārīn Madrasa at Fez, Morocco, showing chiselled stucco and carved timber in the courtyard.



The Gate of Victory at Fatehpur Sikri, near Agra, in India — a city built by the Mughal Emperor, Akbar.

ernally) Turkish ones or the more richly decorated ian ones, with their seemingly more slender lines . . . e is the majesty, offset by the delicacy of its decora-, of the Gate of Victory which leads to the Great que of Fatehpur Sikri, the city founded near Agra by r, the Mughal Emperor, to celebrate the birth of his and described in the essay about *The Architecture ower* as 'the supreme example of the symbolic gate- in Islam, an assertion of the monarch's power and ndour far in excess of any functional need'.

alu Jones, dealing with *Surface, Pattern and Light,* ks of a 'preoccupation with textured surfaces [that] ain: the presence of stucco and tilework in places e alternative materials exist. Even ceramic tiles . . . ppear counterposed to rougher materials like brick, re themselves moulded so as to produce maximum ts of translucency and glossiness and also of depth thickness. Brick and stucco, in particular in Iran . . . onstrate the virtuosity of Islamic craftsmen in the dling of materials to produce three-dimensional ts. Bricks are laid at an angle to cast maximum ow and therefore increase depth of plane. Stuccoed ts of calligraphy bulge and recede or are incised so ly as to appear to pulse and float against an equally rned background.'

far as dwellings are concerned, the book rightly hasises the importance of the courtyard, for privacy, for coolness. As the author of the essay *The House Society,* Guy Petheridge, Editor of *The Conservator,* 'Islam accepted the two basic ancient courtyard e-types of the Middle East and Mediterranean peri-: the interior courtyard house . . . and the exterior yard house . . .'

d in his introduction, Professor Grube (Venice and a Universities) speaks more generally: 'Enclosed , defined by walls, arcades and vaults, is the most important element of Islamic architecture. This is emphasised not only by the phenomenon that little attention is paid to outside appearance or even visibility of any structure, but especially by the fact that most decoration (with the notable exception of the dome and the entrance portal) is reserved for the articulation and embellishment of the interior.'

The professor makes a very clear statement about the difference between European and Islamic architecture. '. . . its main effect — and very likely its main purpose — appears to be the non-tectonic values, the dissolution of all those elements that in other architectural traditions emphasise the structure, the balance and counter-balance of loads and stresses — the actual mechanics of a building. Islamic architecture at its best, and at its most "Islamic", is truly a negation of architecture as conceived in Europe, that is, of structure; it aims at a visual negation of the reality of weight and the necessity of support.'

All the same, it was not always so with European architecture. There has been the curtain wall, and, as Professor Giedion, for many years Professor of Architecture at Zurich and a name revered in architecture circles in most parts of the world, said of Le Corbusier: '. . . [he] approached the house with a seismographic delicacy of perception and freed it from its inherited ponderousness'.

It's the kind of statement that makes one wish that the concepts of Islamic architecture had not been more widely spread than they had even over that vast stretch of terrain. For many of them, particularly the imaginative use of the courtyard, are just as suited to many parts of the Australian continent as they are to the lands to which Islamic architecture spread.

Perhaps *Architecture of the Islamic World,* if, as is to be hoped, it becomes additional reading in our universities, may help spread those concepts.

DANIEL CAMERON

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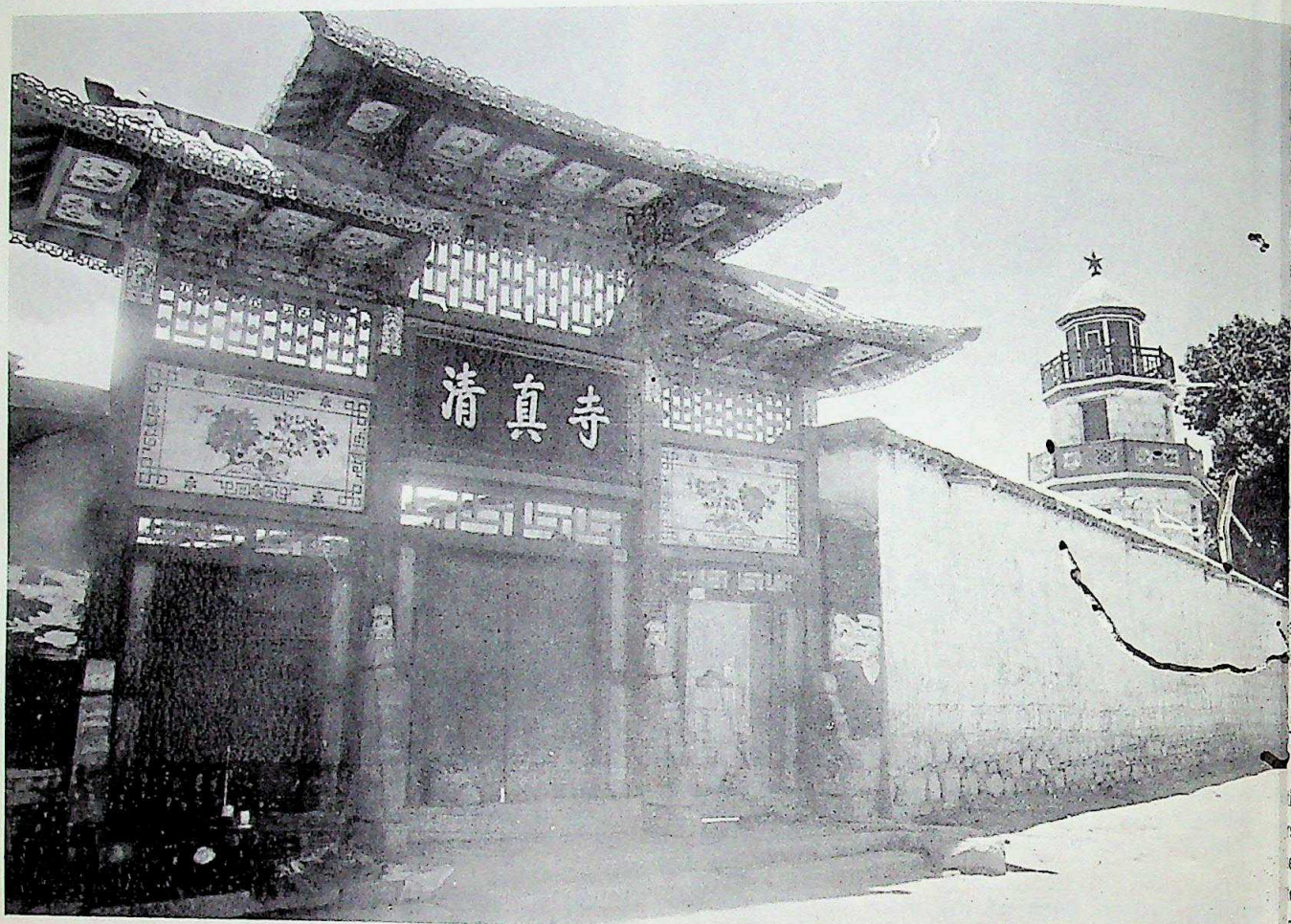

A temple gateway in Lhasa.

THE FORBIDDEN CITY—ALLOWED

Warren Duncan

Photographs by the Author

BELOW the brilliant gold-covered roofs of the seventeenth-century Da Zhao Lamasery old women still finger their beads in the streets and chant the age-old sutras. Our guide tells us that the old folk are free to use the lamasery for worship. The lamasery has a gate with a lock and on early morning strolls I often saw old people silently praying before the temple outside those gates. Late one afternoon, as the blinding Himalayan sun finally softened and sank into the snow-clad peaks, I saw an old woman bent fervently in prayer before a pile of broken bricks, her frame angled so that if she raised her eyes she would gaze on the mighty Potala Palace, hundreds of feet above, where the bones of a line of reincarnations of the Dalai Lama lie in peace.

There are no lamas in that majestic palace any more. Government officials, including those of Tibetan birth,

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ed me that no administrative action prevents young or boys from training for the priesthood. But few do. many now live in ten lamaseries across the region. the Peking Government came to Tibet in 1951 were, it is believed, over a hundred thousand lamas ndreds of lamaseries.

change from the stern rule of the senior lamas has inly been the catalyst for a physical transformation e land. Party officials point to self-sufficiency in economic stability for every citizen in town or try commune, air and road links with the rest of a and the rich resources of timber, minerals and power ripe for tapping.

is nearly twenty years since Peking assumed full rol of over a million square kilometres of the territory ove the centuries has sometimes been under Chinese rol sometimes not; but it had always been governed its own aristocracy and religious authorities. The arture of the fourteenth Dalai Lama twenty years ago ve in India meant that the process of socialising one a half million Tibetans would begin.

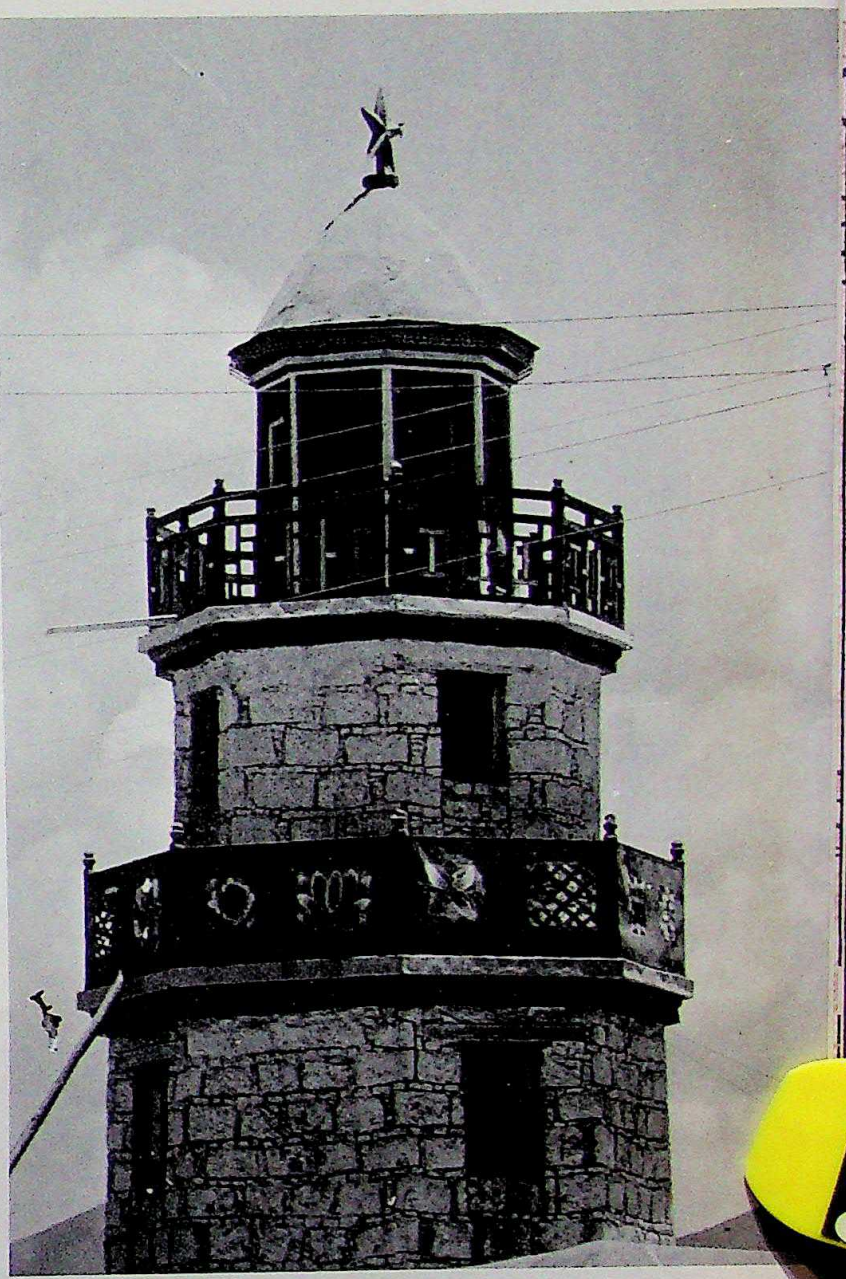
e Peking leadership went ahead with its program. closed region of Tibet became the most sought-after ination of many interested observers. In the intervening s, few people went to the area, and most were very ely supervised, so that when the Chinese authorities ed my wife and me to visit Lhasa without restriction accepted most willingly.

e found we could range freely for several hours each With three and a half years as a foreign correspon- behind me, it was easy to see whether or not things e being staged, and it is obviously impossible to ge' a city for over a week.

n arrival, it was clear from what Mr. Chen Ching, ctor of the Foreign Affairs office of the region, said re ion or its disappearance was a key to the mobili- n of the people. To carry out the program of ernisation they naturally had to break the sway of lamaseries and expunge the taboos that had stopped ordinary people from eating 'living things', from wing grain in winter, from planning a varied diet of and vegetables, to break the back of poverty and pression that allowed only the children of the ocracy to study and where the main subject of learn- ay in the religious writings.

r. Ching said the young people of Tibet today believed cience. In the old days, he said, monks chanted sutras prevent hailstorms destroying the crops, but now nce had shown how to disperse hail-bearing clouds rockets. When the peasants were sick the lamas to give them potions. Now, hospitals, clinics and foot doctors dispense scientific medicine and ase is controlled.

the fifteenth-century Zhe Bang temple — the biggest alning in Lhasa — a group of lamas in red robes



Tower at the corner of the temple complex shown opposite.

demonstrated the way they would chant an ancient sutra to bring rain. They sat on cushions in semi-darkness in a dark but obviously fabulous hall with their gongs and drums and incense and chanted. A little while later, in a sun-bathed upper reception room, brilliantly decorated with the hangings of the Buddhist faith of Tibet, a man acting as a spokesman for the monks turned out to be the overseer of the monastery. As he talked we drank buttered tea and sat comfortably on cushions and traditional Tibetan rugs.

The spokesman, Chin Ba Li Tso, was Director of the Administration of the temple. He wore a crisp white cotton shirt, a grey felt hat and the black woollen robes of the Tibetan man's costume. He explained that approximately three hundred lamas remained in the Zhe Bang

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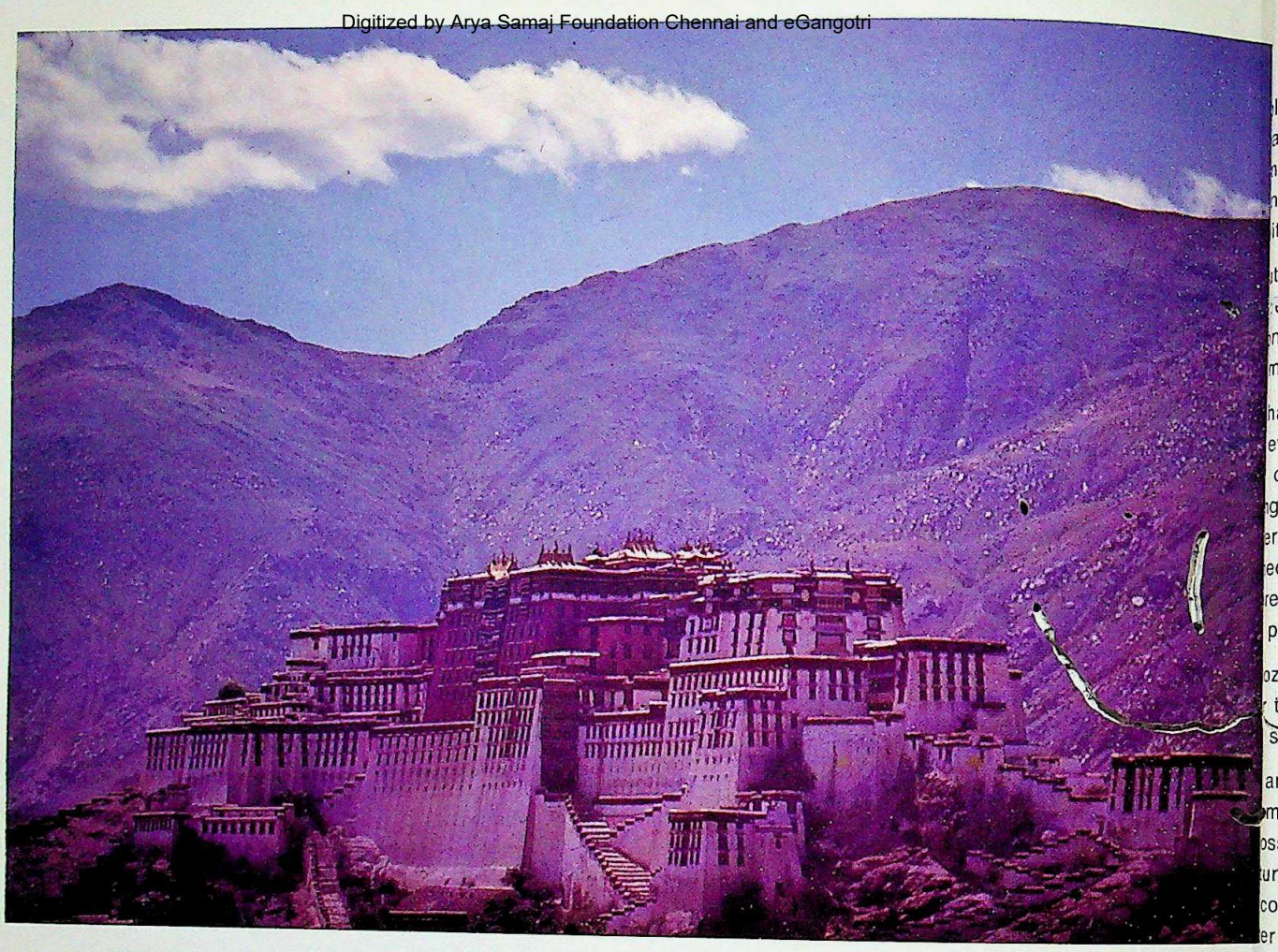

The Potala, the former residence of the Dalai Lama, and, below, an early morning scene in the older part of Lhasa.

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le and spent an eight-hour-day in the fields, orchards astures. Of the administration of the temple, he said ain task was to care for the life of the lamas, to nise productive work and to engage in religious ities as well as organising political study.

t for all the economic success and development, and eduction in the number of lamas, Tibet remains a n of people rooted in their religious past and the medieval life.

had already discovered the Middle Ages for myself evening before, innocently strolling in the old sec- of the city. In an open earth clearing a smiling g man had pitched a tent, lit a fire to brew his ere tea and was quietly feeding his mules, uncon- ed that he was right in the middle of a capital city re trucks and buses rumbled by and army officers past in curtained limousines in an endless bustle.

ozens of youngsters followed us for more than half an totally absorbed with our physical features—pointing staring at our anatomy.

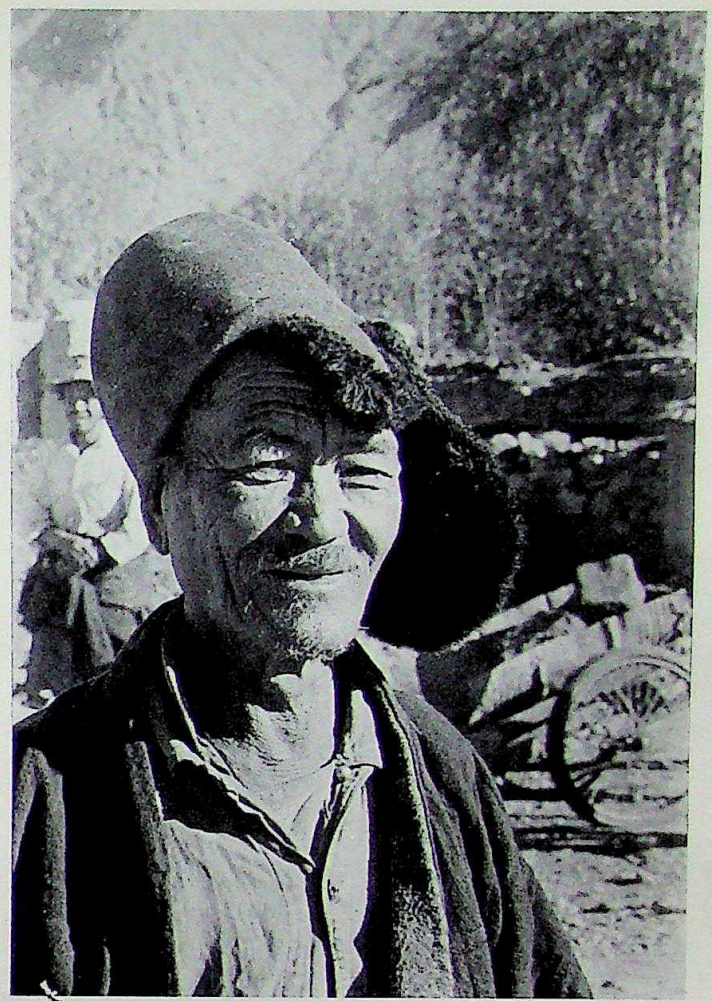
am sure they had no idea who or what we were. munication, even in standard Chinese, was almost ssible, but they were very happy to teach us with ures and repetition as many words of greeting as could absorb. Even our usually reserved Peking inter- er was caught up in the transportation in time we undertaken. He felt as foreign as we did, standing street that ended in a magnificent gold-roofed temple was of a time other than ours, and lined with simple ewashed rough stone dwellings.

or a moment we could not see anything of socialist, ntieth-century Tibet. There was no anachronism. I never experienced such mutual awe as when the ssing crowds, from babies to the ancient and age- found in us the same wonder that we experienced. r the slight annoyance of being stared at all over a for the previous three years I now felt the need stand and drink in the humanity irresistible.

discovered faces as dark as the dyed wool tunics veils they wore, adorned with slightly greying, plaited for both sexes: faces that easily produced smiles the young woman and this bearded foreign creature a young man's face. Some honoured us with the ent greeting of friendship—a well-poked pink tongue.

n old lady eyed us as she fingered her beads while lips moved to the ritual saying of the sutras. Another man, fascinated with us, continued to move his lips ayer.

wo robust men of indeterminate years wearing square- tunics might easily have just ridden in from the golian steppe. The children in all sizes, clothing and ur, pressed their hands into ours and their faces ed into continuing smiles of acceptance and lement.



A yak herdsman, camped on the outskirts of Lhasa.

Back inside the locked gates of our place of residence, the sounds of the children's farewells fading into memory, it was impossible to repaint in words a picture of another time, as I sat in a comfortable suite of Chinese-style rooms and a Chinese staff served fresh yoghurt and coffee as a late night snack.

Yet even in the face of applied science the force of ages remains. On the outskirts of the tiny city a young and very impressive Tibetan woman, a Communist party member, Mrs. Ni Ma, who runs an agronomy institute, complained about the battle to have its valuable research findings implemented. She told me that superstition sabotaged the use of insecticides, the planting of pre- viously unheard-of winter crops and the introduction of new vegetables such as tomatoes and pumpkins. She said the research workers had to spend as much time 'selling' their techniques as perfecting them. Likewise old habits and religious beliefs are still hampering efforts to widen the diet of the Tibetan people who traditionally knew almost nothing beyond buttered tea, and *zampah* — a cereal mixture based on ground highland barley. Religion formerly prevented their killing fish or animals for food, and vegetables were virtually unheard of.

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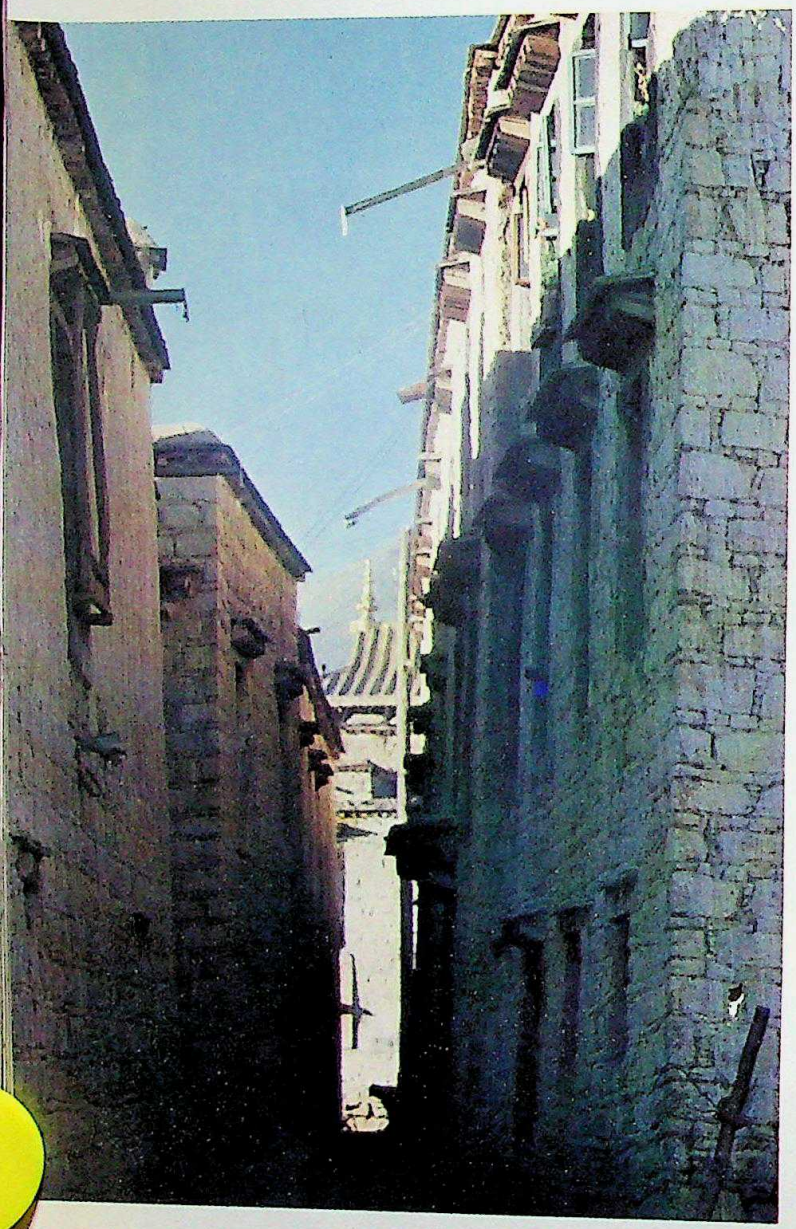
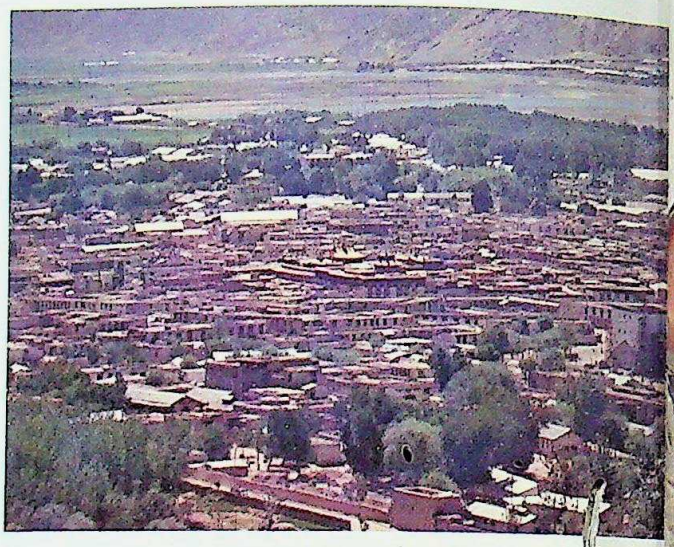
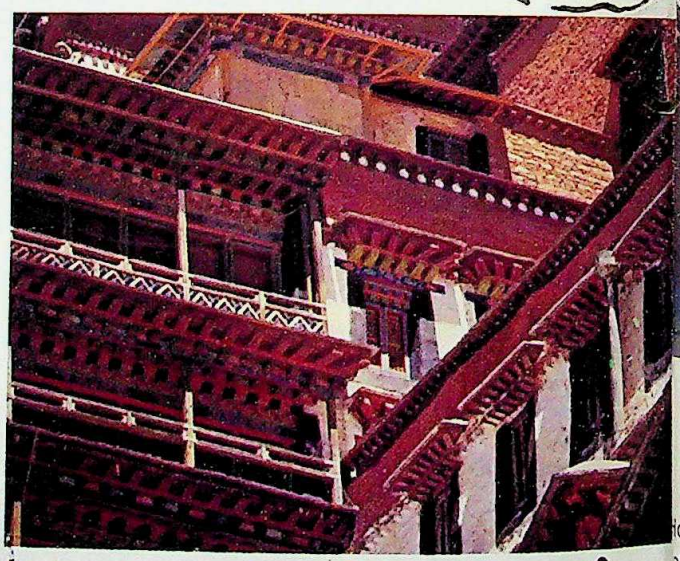


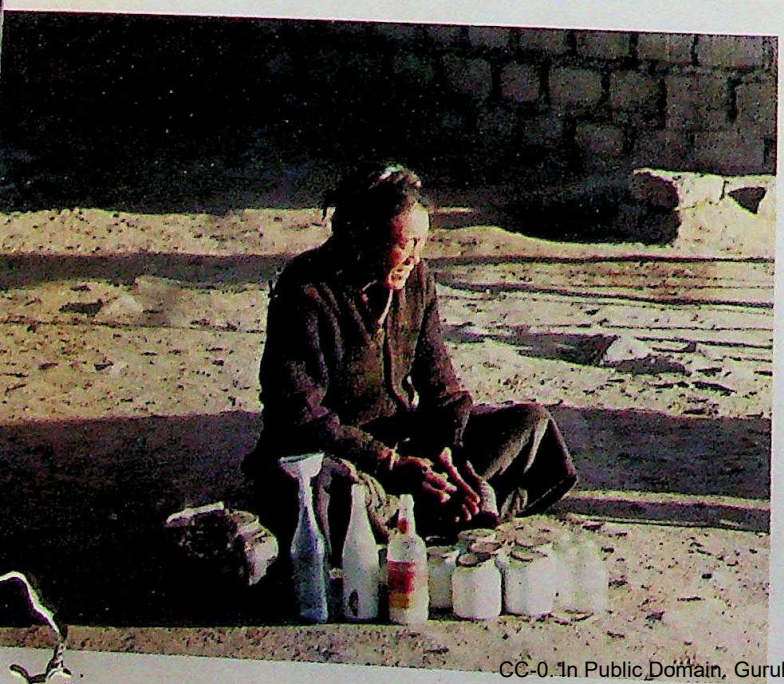


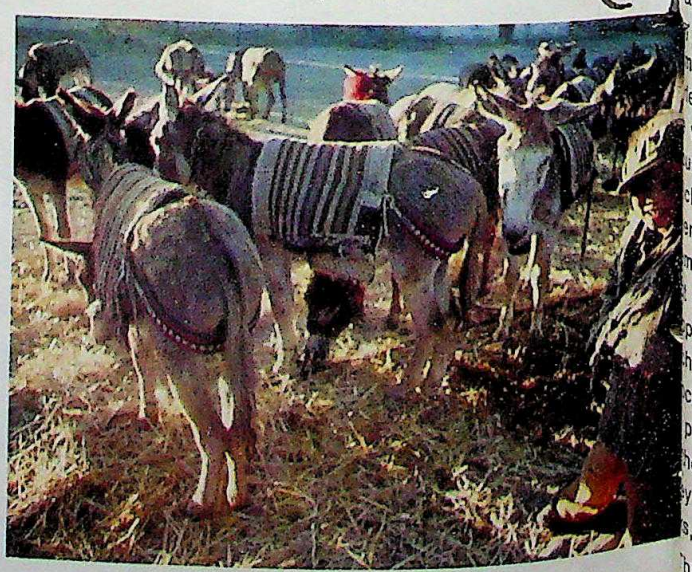
General view of Lhasa.



Above: A street scene in old Lhasa. Below: A bottle-seller.

Above: Intricate woodwork on the Potala. Below: A nomadic boy herdsman.





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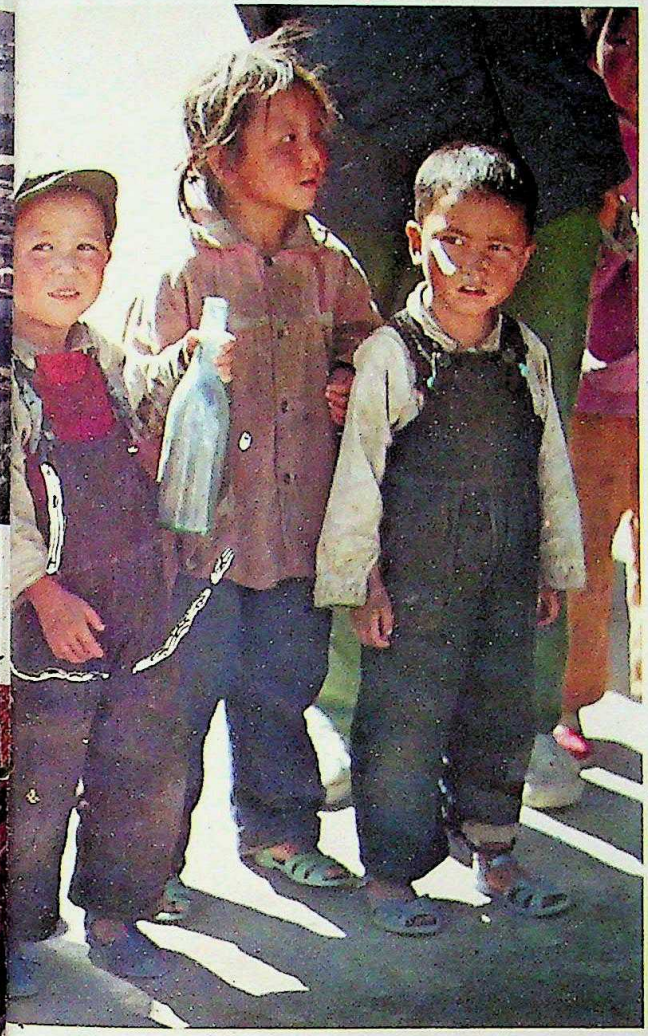

Youngsters interested in the camera and the visitors.

A monk in his traditional robes at the Zhe Bang Monastery.

owever, change is coming—and in some areas, quite ckly. On a commune made up entirely of Tibetans just Lhasa, during a meeting with commune leaders a handsomely constructed hall, we were offered, not buttered tea and *zampah* but also yoghurt made yak's milk, cheese made from the milk of goats, ey wine, broad beans and bread sticks baked from winter wheat now being produced at the rate of two sand-two-hundred kilograms per hectare. They were k to deny that their 'Bei Ting' commune was any- re near the best in Tibet. But their thirteen hundred bers produce more grain than they need and sell the to the state for a profit, while also keeping a year's ply in store against adversity. Apart from his salary worker and each member of his family is given an cation of butter, meat and wool. We were told that per cent of the households could afford to put aside er reserve grain and had money in a bank account. graze eight thousand head of livestock including , goats, pigs, mules and milch cows.

his kind of success has not been achieved without culties, and senior Chinese officials admitted that the Peking-appointed leaders are now treading very carefully along the path of hand-in-hand co-operation.

Yet there are clear lines of differing development. The newer section of the city is in the Chinese style and inhabited mainly by Chinese workers and officials, the Peking-built department store sells goods from all over China while local merchants sell only locally-produced goods from their smaller outets. In medicine, local people can seek traditional herbal treatment from a separate hospital. Chinese and western medicine is available to all in a modern hospital in the new quarter.

No doubt the formula for mixing the cultures is a calculated one designed to achieve ultimate rather than short-term success. History will no doubt keenly assess the wisdom of the policies. But Mr. Chen Ching, who originally introduced us to the capital, proudly boasted he had lived and worked in Tibet now for twenty-eight years, even though his family lived in a far-away province of China—and he had no desire nor intention of leaving.

Warren Duncan was the Australian Broadcasting Commission correspondent in Peking from 1975-78.

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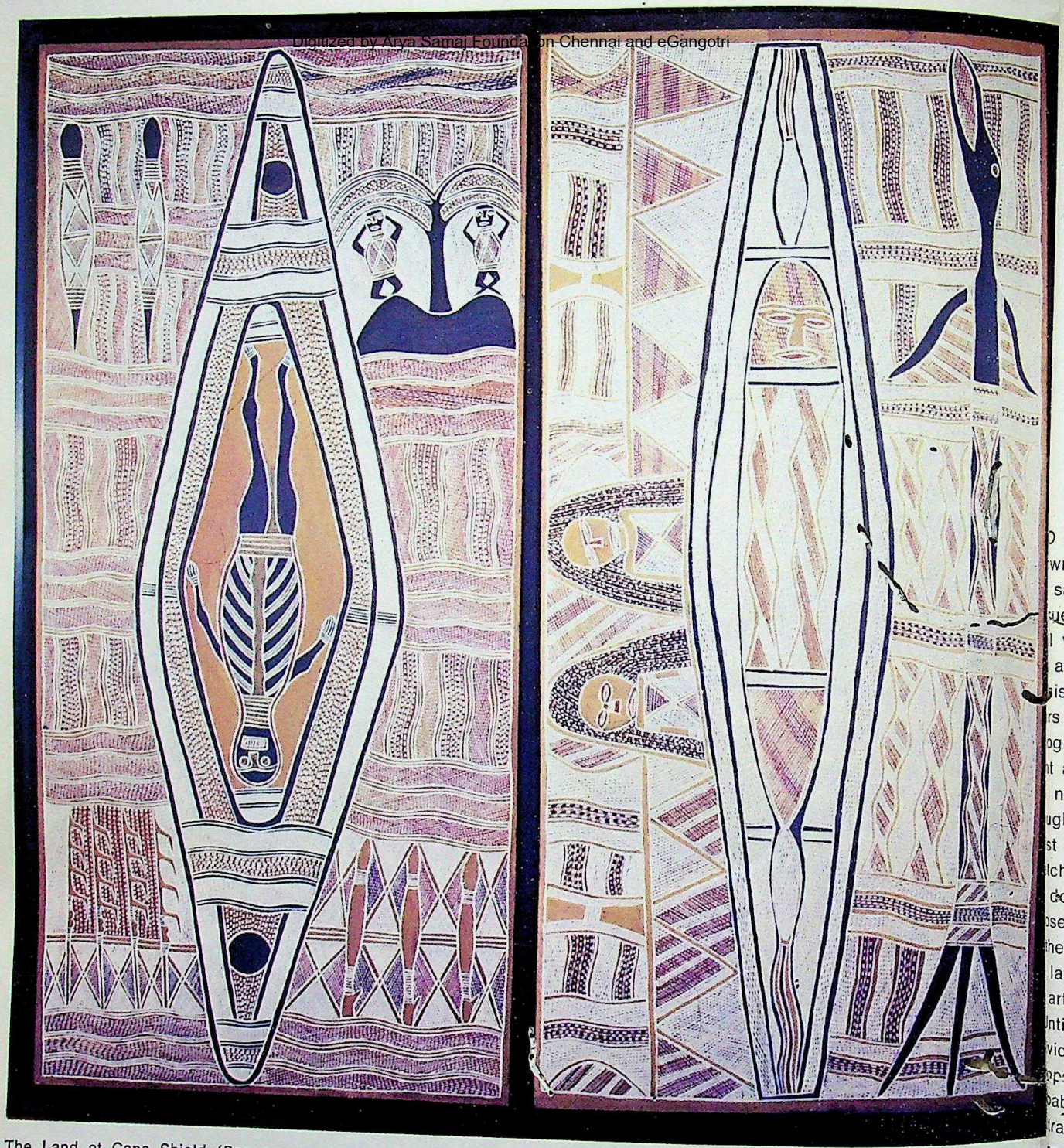

The Land at Cape Shield *(Banapana and Narritjin). The right-hand panel is a map of Manggalili Clan land at Djarrakpi on Cape Shield. The central figure represents the lake; the figure to the right, surmounted by the head of a bird, signifies a bank to one side of the lake. The triangular pattern, on the other side of the lake, represents the high sandhills separating the lake from the sea. The left-hand panel depicts an area of land next to the lake. The place is important because of its ceremonial ground, Yingapungapu, used in burial rites. In the centre of the panel, the dotted pattern surrounding a body on the ground suggests maggots.*

GEOLOGY IN OCHRE

Howard Morphy

Photographs: Malcolm Lindsay (A.I.S.)

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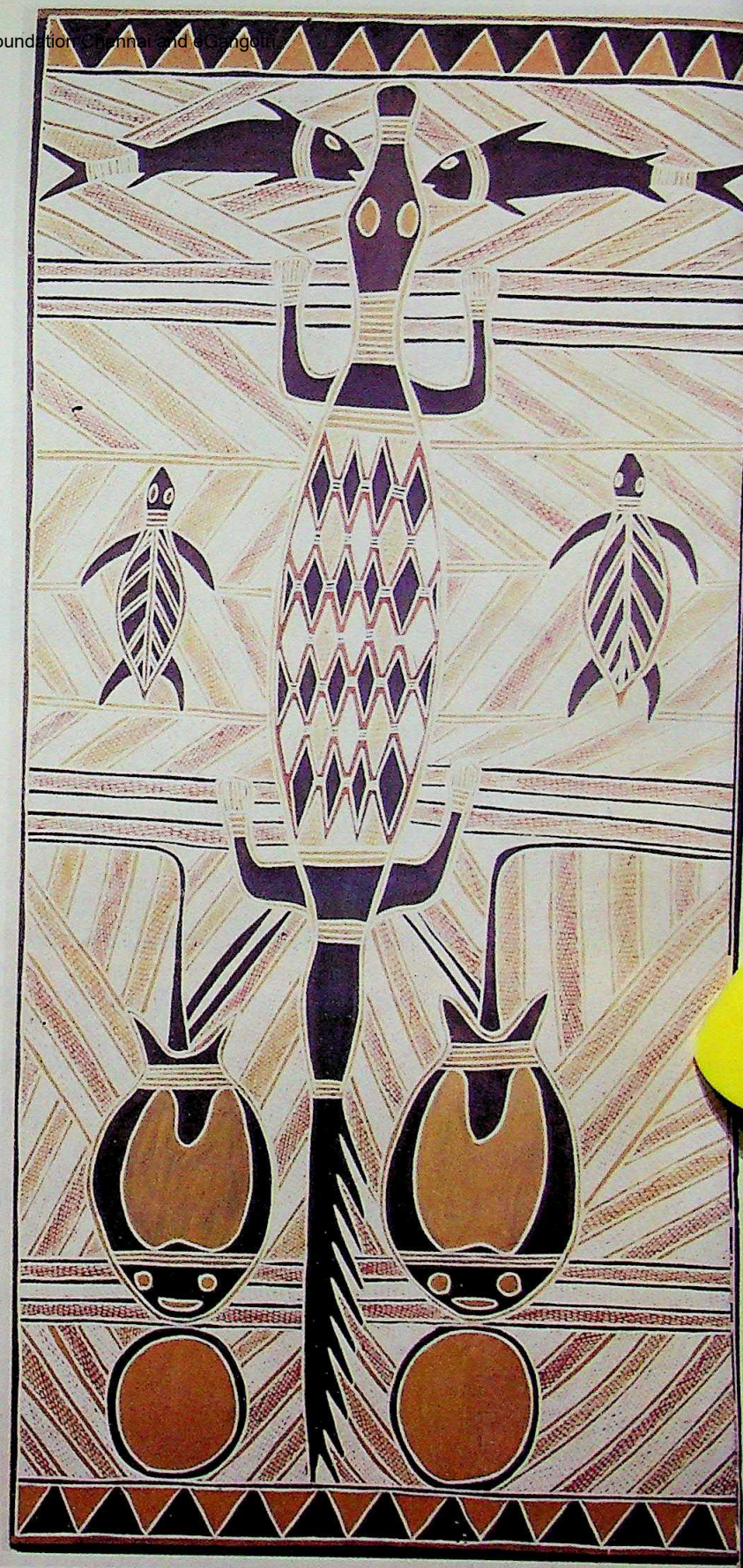

O SAY that Narritjin and Banapana Maymuru are well-wn artists from north-east Arnhem Land is to say at same time nothing and everything. Nothing because ue it is a self-evident statement, everything because l very recently it would have been impossible to say about any Aboriginal artist working within the context is or her own tradition. Although over the past fifty rs different Aboriginal artistic traditions have gained ognition in the Western art world both in their own t and as an inspiration for works by European artists, names of the artists have on the whole not been ught to be worth recording. We know the name of the st on Flinders' voyage around Australia who first tched portraits of the Aborigines of Arnhem Land but do not know the names of the artists from Oenpelli se paintings, collected by Sir Baldwin Spencer, are he corridors of the National Museum of Victoria. Yet latter are far more significant works in the history of art of the world.

ntil the last two decades, in order to be known as viduals, Aboriginal artists have had to work within opean traditions. It is ironic that Aranda designs are bably more closely associated with the work of white tralian artist Margaret Preston, who integrated them er own paintings, than with Albert Namatjira, the known of all Aranda artists, who painted landscapes n introduced medium, water-colours, in the style of teacher Rex Battarbee. Indeed today the only Aranda-designs in the collections of the Australian National ery are to be found in Margaret Preston's work, as Gallery has, with one notable exception, no works traditional Aboriginal artists.

owever, today the overall situation is changing for better and an increasing number of Aboriginal artists gaining recognition while working in their own tradi-s and presenting their own designs. The major state galleries of New South Wales, South Australia and Northern Territory have significant collections of riginal art and every effort is being made to ensure the artists' names and affiliations are known. Artists as Yirrwala, Narritjin, Mawalang, Munggurrawi and

The Crocodile and Stingray Fight *(Banapana). This painting belongs to the Gumatj Clan of Banapana's mother's mother, which represents a fight between an ancestral being in the form of a crocodile and a stingray ancestor. The diamond pattern on the crocodile's back is the fire that he carried on his journey; the triangular patterns at top and bottom, clouds above the sea.*

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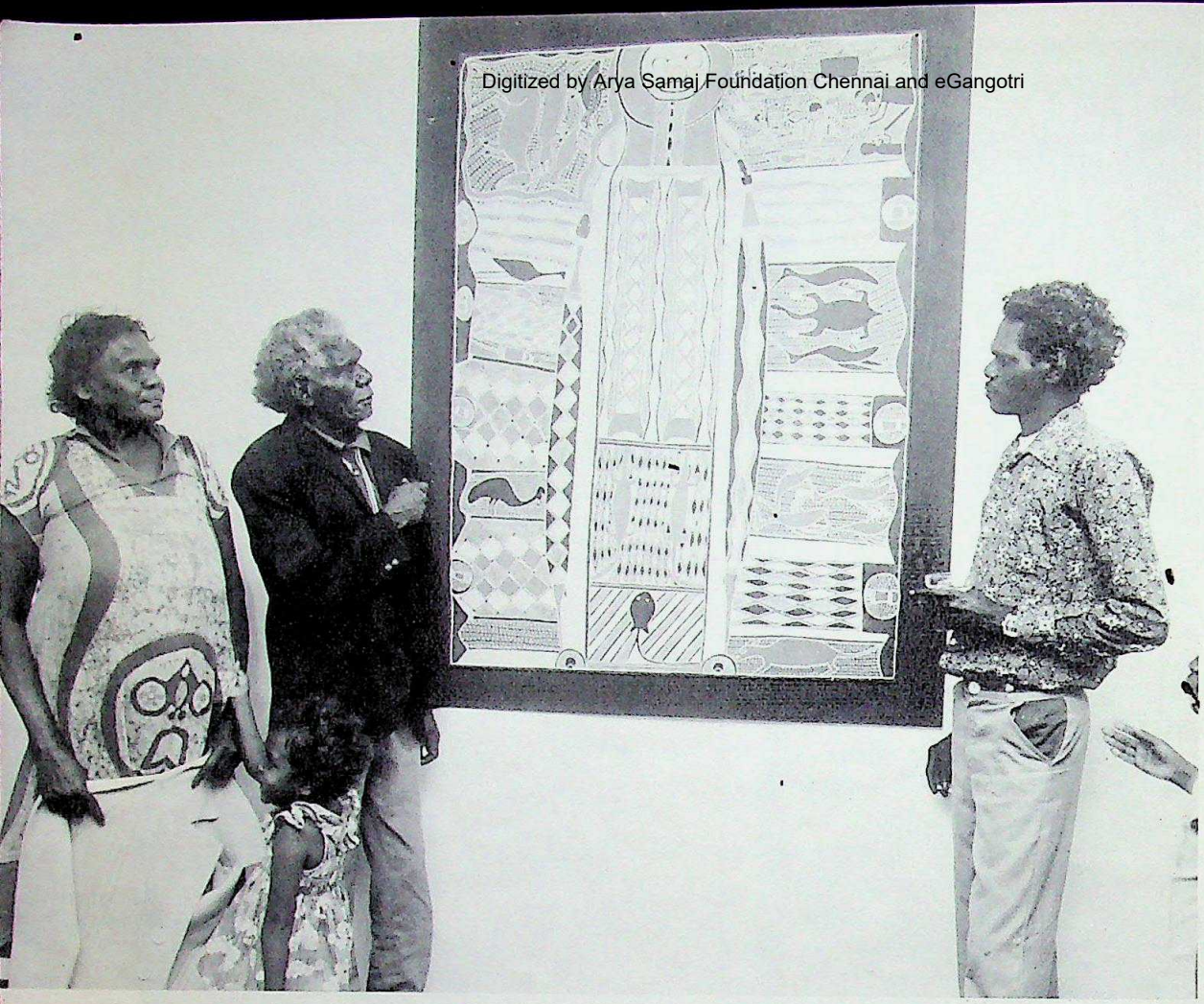
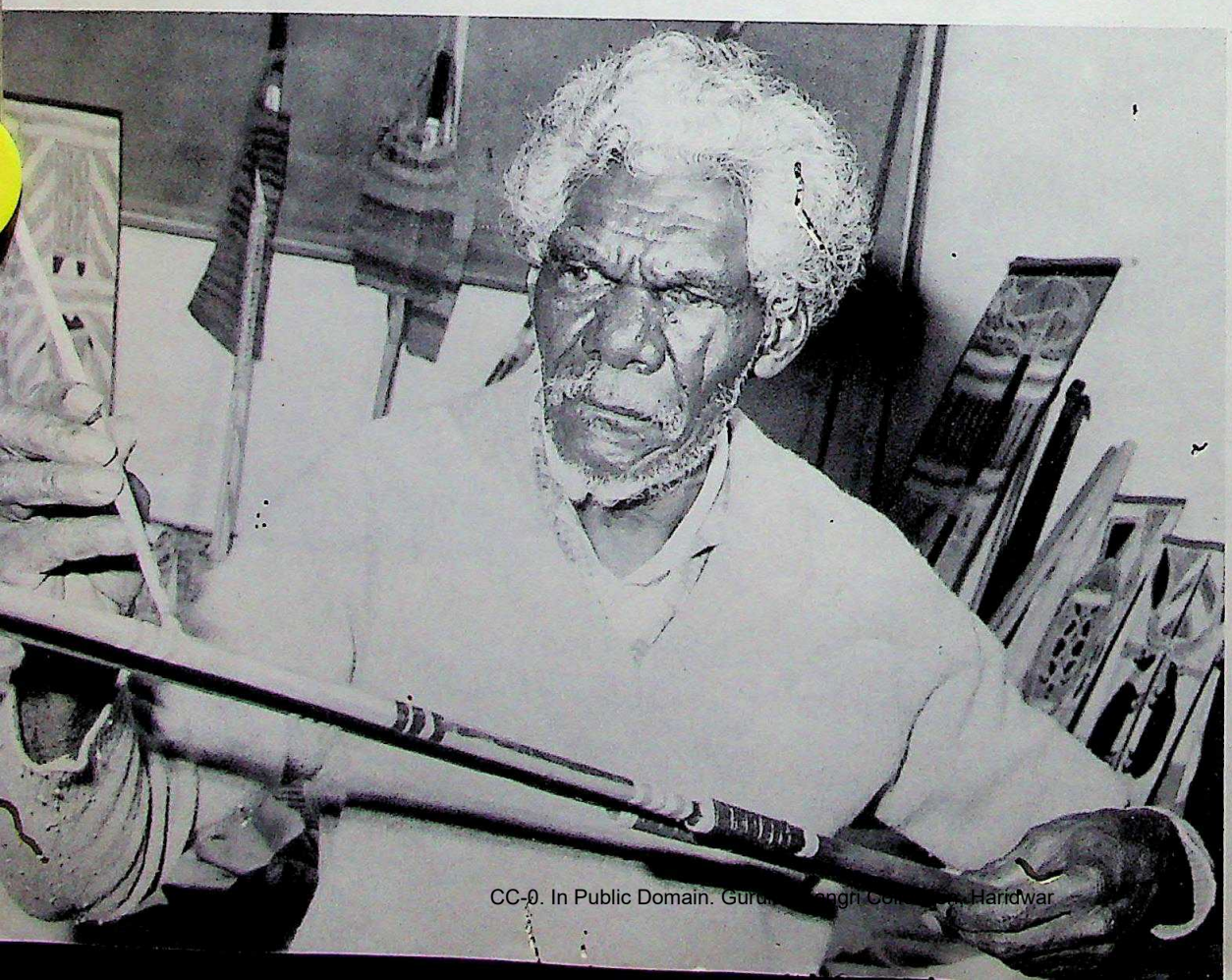


A family group: Narratjin and his wife, Bangara, with their son, Banapana, and their granddaughter; Narratjin decorates a spear.



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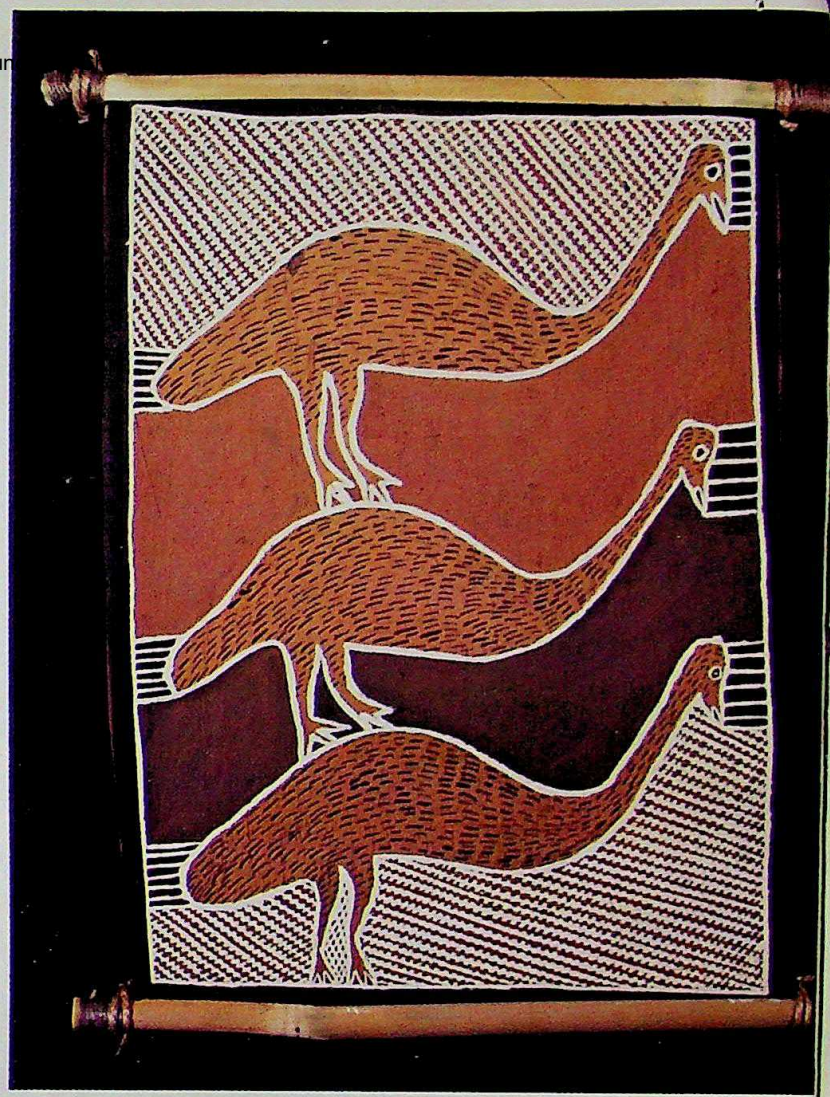
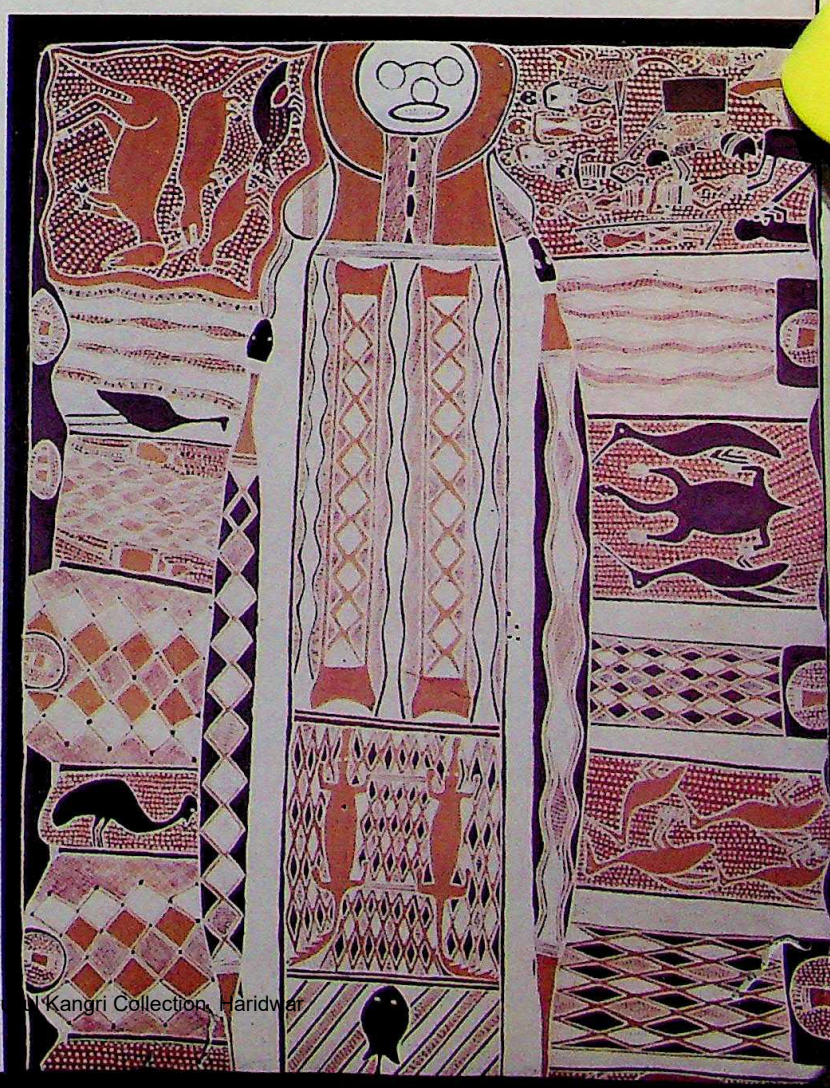
alangi are well known and their works are highly re-rded and much sought-after. The recognition of the ist as an individual is an important prerequisite, if original artists are to get a fair return for their work d attain the status accorded to professional artists in estern society.

The award of Creative Arts Fellowships to Narritjin d Banapana Maymuru at the Australian National Univer-y was a major step in the direction of increased cognition for Aboriginal art and artists. In material rms the fellowships were made possible by funds ovided by the Aboriginal Arts Board and the Faculty Arts at the University. Equally important to the success the venture was the artists' motivation, as they had to end several months away from their Manggalili clan rritory of Cape Shield on the Gulf of Carpentaria and ve in the cold city of Canberra. It was for Narritjin the ulmination of many years spent struggling to gain cognition for his art. Until recently north-east Arnhem and has been isolated from the rest of Australia, separ-ed by distance and the problems of transport. Although arritjin knew from visits to Darwin and southern cities at his paintings were admired he was frustrated by his stance from the market, by the fact that his paintings ere always sold through the local craft store and that e could never deal directly with the final purchasers.

Narritjin's concern was not simply to be recognised s an individual and to be given the opportunity to egotiate on his own behalf with potential purchasers; e was aware of much broader issues than that. The nonymity of primitive art is a symptom of the usurpation the cultural heritage of indigenous peoples and the isregarding of their rights by colonising cultures. The borigines of north-east Arnhem Land see the sale of eir art both as a means of making money and equally portant as a way of asserting their cultural identity nd independence. However, it is only possible to assert at identity if it is known to whom the works belong nd what their significance is to the people who made em. Hence individual identity is very much tied to the oblem of cultural identity.

Narritjin was born near Caledon Bay about the time the first world war and some twenty years before rrkala, the first European settlement in the area, was stablished. In his early twenties he worked for Fred ray, an English pearler, and the Reverend Wilbur haseling, helping them to establish the settlements and rdens at Umbakumba and Yirrkala respectively. As the ears passed by he saw the initial contact with European





p: Emus Standing (Barıapana). Below: A Yirritja Hollow Log offin *(Narritjin and Banapana). In the centre of the painting, hollow log coffin with the skull of the dead man projecting om the hole at the top and the long bones beneath it. The offin is surrounded by the designs belonging to all of the rritja clans in the area of Yirrkala, which would have been painted on the coffin of an important man.*

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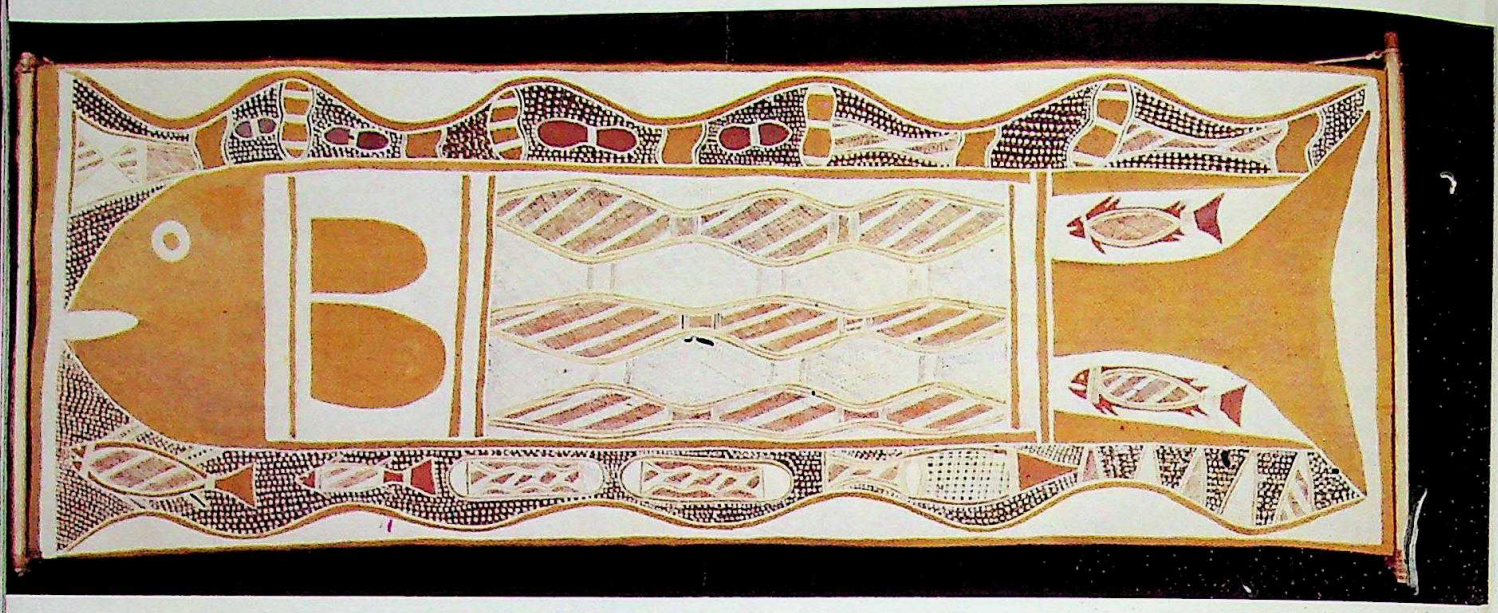

Kingfish at Wayawpuy *(Narratjin). The kingfish made the Wayawpuy River, whose banks are shown on either side of the painting. The Mungalili Clan design in the centre of the fish represents the waters of the river, and the white designs, the clay found on its bed and used for painting for ceremonies. The river is a major place for collecting* Yoku, *a lily-root, shown by the yellow figures on top of the fish. The edible bulb of the* Yoku *grows in the black mud on the river bed. The dots are bubbles made by people disturbing the water as they collect. The triangles are spikerush growing on the river bank. Above them, a figure representing a dilly-bag in which the roots are collected. Over the eye of the fish is a symbol for a cloud that the ancestral kingfish followed as a guide on his journey.*

Below: Nowalming, Benapana's son, helps with the family project.

society intensify as more Europeans became interested in the region. The threat to the Aboriginal people and their land grew as rich bauxite deposits were discovered on the Gove Peninsula. Mining leases were granted and the Yirrkala people saw their hold on the land that had been theirs for countless generations slipping away from them. Their response was to take up the issue with white Australian society by sending petitions on bark to Parliament and taking the Commonwealth of Australia to court. In 1976, partly as a result of their determined efforts, the people of Yirrkala were among the Aborigines to be granted title to their land by the Australian Government. The people of Yirrkala see the whole process from contact on as being fundamentally concerned with the education of Europeans about Aborigines, a process that is continuing. To Narritjin the offer of a Fellowship at the Australian National University meant an opportunity to continue this process in Canberra, the centre of white Australian Government. As Narritjin himself said: 'There is a government in the land, a government whose laws were set a long time ago, before any Europeans came. We have to show Europeans how to act according to that Government. . . . We must not have people acting in our land outside the laws of Aboriginal Government.' Narritjin came to Canberra to share with people some of his knowledge and to demonstrate clearly the basis on which his clan owns its land.

While in Canberra Narritjin and Banapana produced fifty paintings. They used as pigments supplies of red and yellow ochre, manganese and pipeclay that they had brought with them. On some of the larger paintings they worked jointly. Narritjin took the opportunity while in Canberra to teach Banapana some of the clan's painting that he had not previously been shown how to do. As the senior man of his clan he is responsible for ensuring that the clan's designs are passed on to the new generations of clan members who will succeed him.

In lectures and in discussions Narritjin and Banapana explained to university students and others something of

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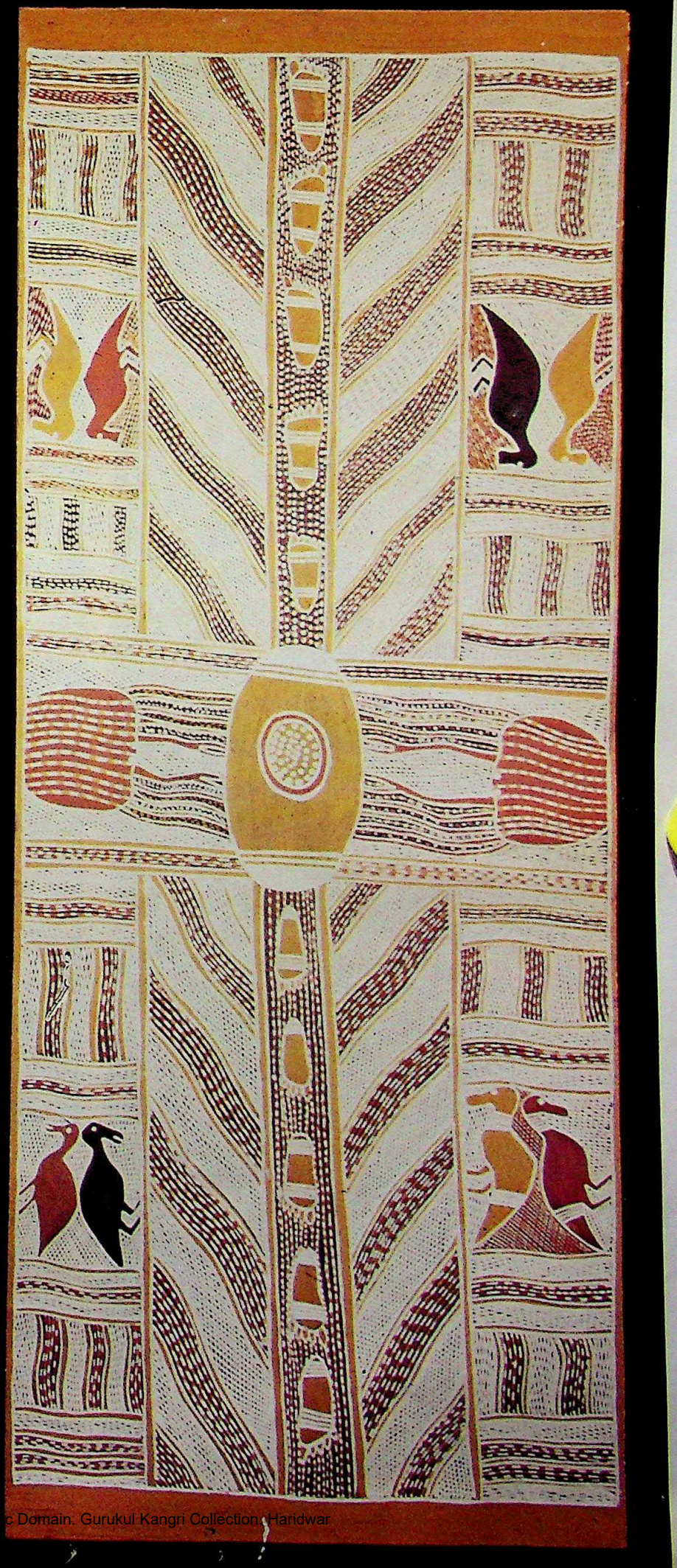

Sandcrab and Turtle Tracks *(Narritjin). This painting symbolises an area of the beach at Djarrakpi; it shows two rows of ancestral footprints in the centre, while the dotted marks between them are the footmarks of ancestral dogs that chased a turtle. She had come ashore to lay her eggs, but had been told by the dogs to return to the sea and never again to lay her eggs (the white dots in the centre) on the beach. On either side of the eggs are sand-crabs with their legs extended towards them. The pattern over the remainder of the painting represents (top), the sandhills and (bottom), the sea. The birds in the painting are* Gulu-witjpitj, *of the sea shore.*

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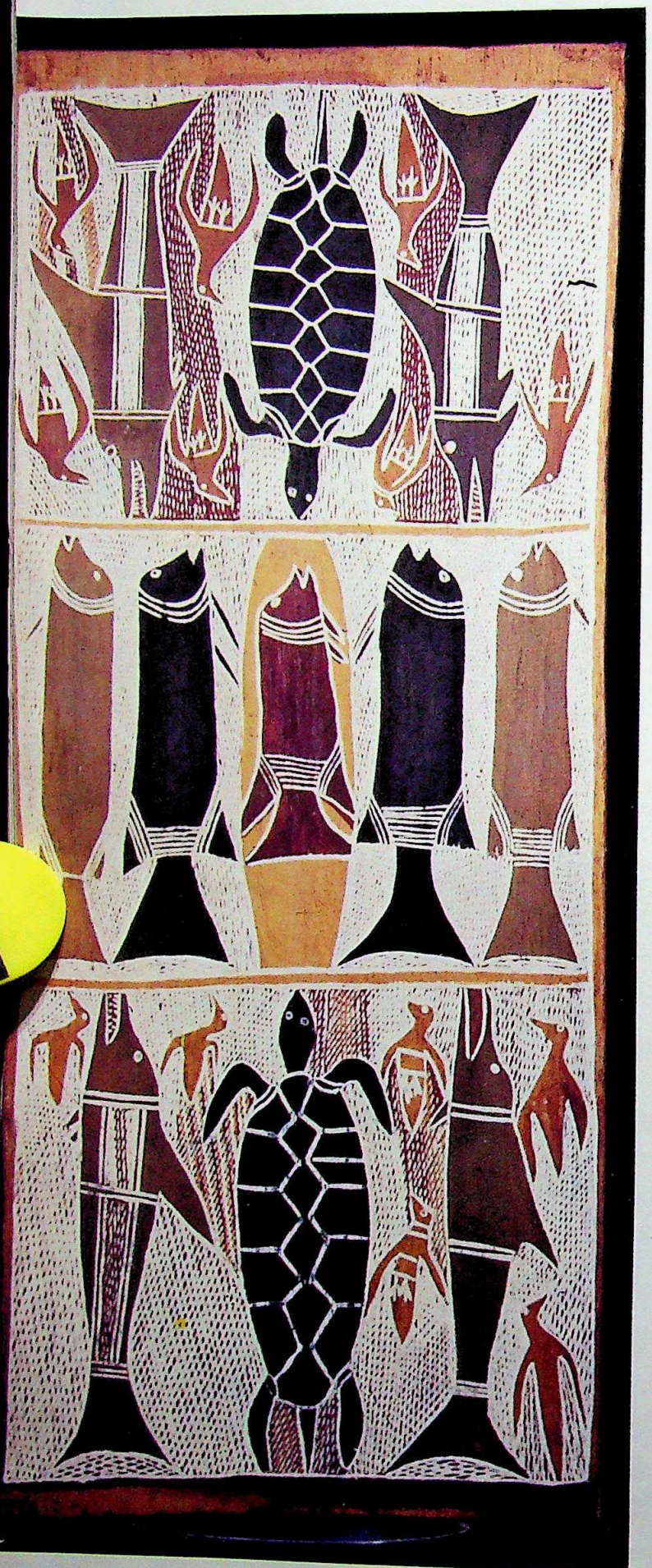

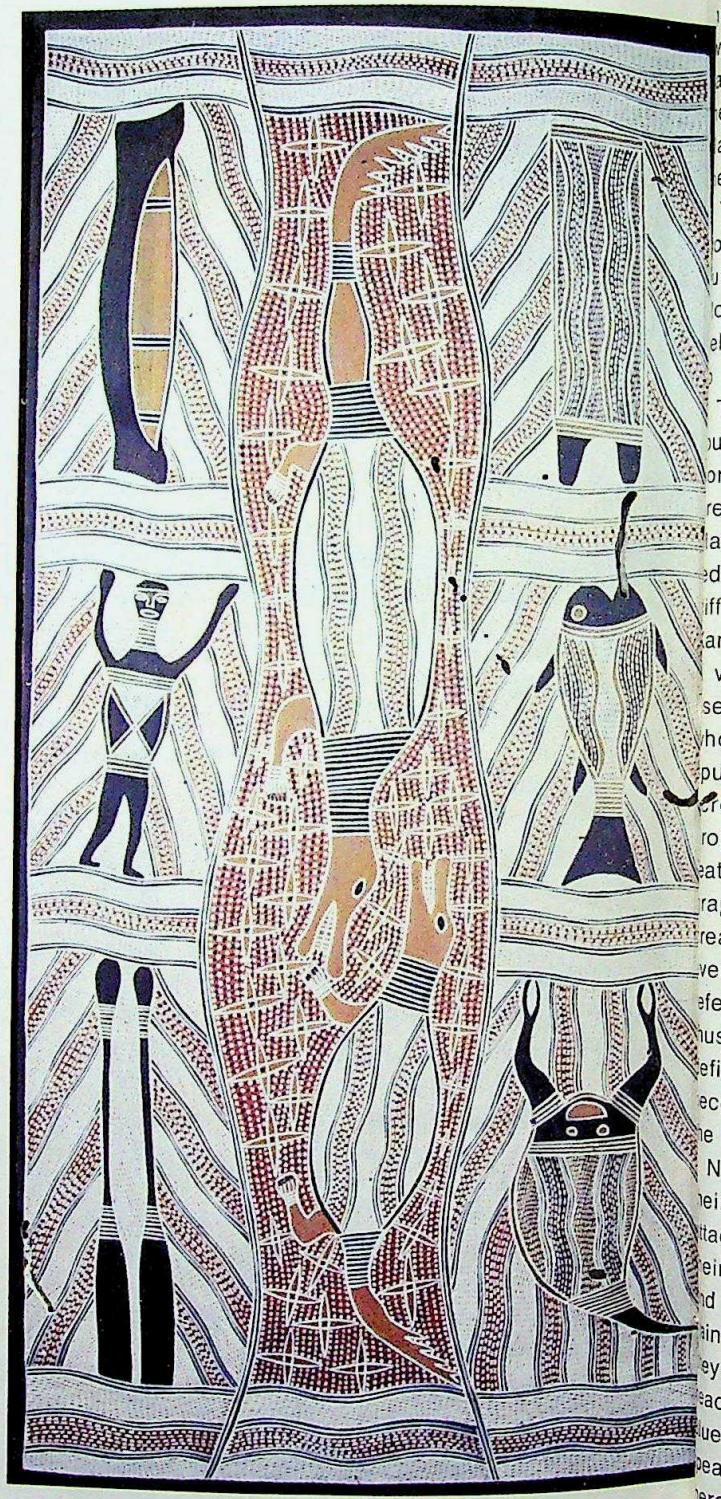

Left: The Sea off Bremmer Island *(Narritjin). This painting belongs to the Djambarrpuyngu Clan, Narritjin's mother's clan, and shows porpoises, turtles and seagulls off the island. Above:* The Milky Way *(Banapana). The Milky Way is in the centre, with the stars that are the spirits of dead people. On either side are objects connected with the journey of two fishermen, ancestors, who died at sea. In the top left-hand corner is their bark canoe; below that is the floating body of a dead man, and in the bottom left-hand corner, the boat's paddles. On the right-hand side, three ancestral beings who offered their help to the fishermen; a sea monster, a kingfish and, in the top right-hand corner, a mangrove tree. The help of these ancestral beings was refused, as the men had decided to die. The crocodile ancestors in the central panel also offered help.*

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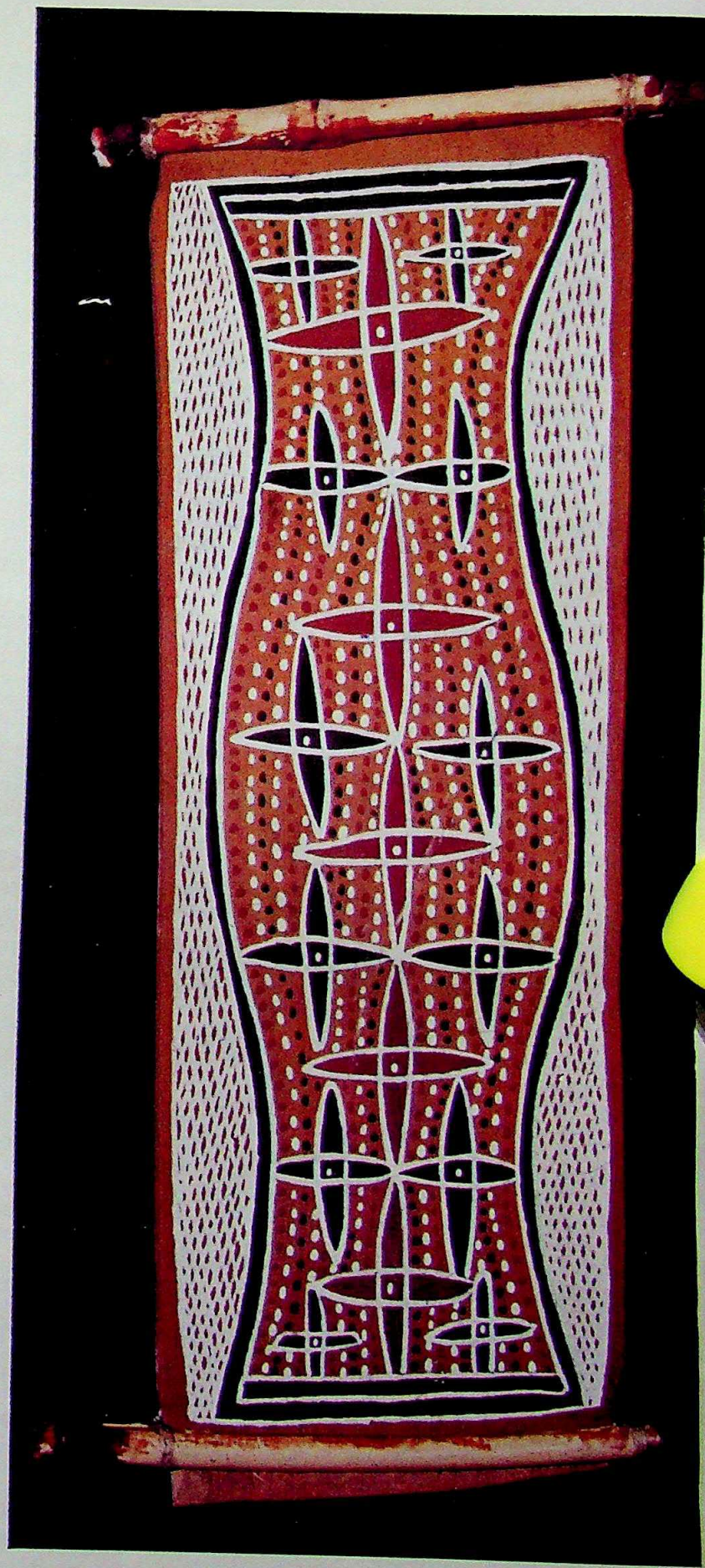
e significance of their paintings. They concentrated on o main themes: the close association between the intings and the land and the fact that the paintings emselves are seen as evidence of events that took ace in the ancestral past or Dreamtime which led to e form of the land as we see it today.

The paintings themselves are seen as the inheritance om the ancestral past. They are not owned by individuals ut by groups of people who belong to the same clan. ost of the paintings Narritjin and Banapana produced long to their own clan, the Manggalili, others belong the clans of their mothers and mothers' mothers.

The paintings record events that took place on the urneys of the ancestral beings as they wandered across orth-east Arnhem Land, creating by their actions feat-res of the landscape. One of the main journeys through anggalili country was that of a group of ancestral beings d by the *Guwak* (koel cuckoo). With the *Guwak* at ifferent times travelled the ancestral Echidna, Possum, angaroo, Emu and Rat. At night the Possum climbed wild plum tree spinning his fur into lengths of string sed in making the sacred objects of the clans through hose territory he passed. The *Guwak* carried lengths of pun string with him from place to place as he flew ross Arnhem Land. As the string got heavy the *Guwak* opped pieces off which then fell to earth forming atures of the land, banks and sandhills. These topo-aphical features are today seen as evidence of ancestral eativity. The paintings by recording these mythological vents that took place in different parts of the country fer through the events to the land itself. The land is us covered in a cloak of mythological events that have finite topographical referants. In this way the painting comes a kind of map of the land; a map owned by e clan that owns the land.

Narritjin and Banapana used the opportunity given by eir fellowships to explain to white Australians the deep ttachment of the people of north-east Arnhem Land to eir own lands, an attachment that is both economic nd spiritual. While in Canberra Narritjin spoke of his intings as if they were on loan from the land to which ey really belonged, the high, windswept sandhills and aceful inland waters of Cape Shield in the north of ue Mud Bay. The paintings come out of the land and peak their messages on behalf of the people who live ere. By releasing their paintings Narritjin and Banapana nable us to see their land as they see it, as Aboriginal nd owned by the Manggalili clan whose complex spiritual entity is contained within their art.



River in the Sky *(Banapana). This is another version of the Milky Way painting, showing it as a river of stars.*

Dr. Morphy is a lecturer in the Department of Prehistory and Anthropology at the Australian National University, Canberra.

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THE AUSTRALIAN CONSTITUTION

Commentaries on the Australian Constitution, edited by Professor Leslie Zines; Butterworths, Sydney. ISBN 0 409 43680 1.

THIS outstanding collection of essays on fundamental issues deriving from the Australian Constitution has been produced in honour of Professor Sawer who has retired, but continues his links with the Australian National University. Now he is Visiting Professor at the University of Bristol. Mr. Justice Else-Mitchell writes of him in the introduction: 'He has been not only a teacher but an academic and legal catalyst spreading his influence, knowledge and wide counsel across many disciplines.'

In the first chapter Professor Zines deals with a subject of increasing importance: the growth of Australian nationhood and its effect on the powers of the Commonwealth. A summary of the position in 1900 (with special reference to the prerogative and legislative power) is followed by an account of the issues which arose and developed after the establishment of the Constitution in 1901. Among the many interesting references made to the progress of nationhood are the reliance of Barwick, C.J., in the Payroll Tax case (1971) on the Canadian Bonanza Creek case of 1916, the effect of change of status on the interpretation of the legislative powers of the Commonwealth, external prerogatives, the Statute of Westminster, and external affairs power. References to Fishwick and Cleland (1960) and the Seas and Submerged Lands case (1975) and the conclusions to be drawn therefrom conclude this interesting paper.

As Professor Richardson says in the second chapter, which relates to the executive power, 'Professor Zines plainly shows that the executive power of the Commonwealth now includes such of the prerogative powers of the Queen as are appropriate to the Federal Constitution'. This was not always considered to be the position. Professor Richardson analyses S.61, the prerogative powers of the Governor-General, the executive power and its subordination to the legislative power (for example, Barwick, C.J., in the Seas and Submerged Lands case 1975), implied executive power (Mason, J., in the Australian Assistance Plan case 1975), the position of the States, and the execution and maintenance of the laws of the Commonwealth and the Constitution.

'Parliament and the Executive' is the title of the third chapter written by Professor Enid Campbell of Monash University. After pointing out that no great detail is given in the Constitution to the relationship between the three branches of government, and that the framers relied on what Dixon, J., in the Communist Party case termed 'traditional conceptions', the writer discusses S.61 and other sections such as 5, 28, 32 which reproduce some of the royal prerogatives. An interesting discussion of S.49 and MacFarlane's case (1971) follows. Crown privilege in Parliament is discussed at some length. This subject is still somewhat uncertain but the writer's views are expressed clearly and persuasively.

Dennis Pearce, in a chapter on the legislative power of the Senate, discusses SS 53 to 57, their history, construction and operation. The views of Barwick, C.J., in Cormack and Cope (1974) and the reasoning in Osborne's case (1911) are discussed. Other controversial topics discussed include the originating of money bills, the reiteration of requests by the Senate, the phrase 'the ordinary annual services of the Government' (S.53), and the rejection or failure to pass a proposed law (Victoria v. The Commonwealth 1975). A preference is expressed for the views of Barwick, C.J., and Stephen, J., on the somewhat difficult question of when the period of three months begins (S.57). The writer refers to the desirability of having a Constitutional Convention to consider afresh what should be the legislative powers of the Senate.

In his chapter entitled 'Duty to exercise judicial review' Mr. Geoffrey Lesidell methodically analyses the pros and cons of whether a duty is created to exercise a jurisdiction when it is bestowed on the High Court. His own view is that a simple grant is sufficient to create an implied duty (that is, in the absence of express provision to the contrary) but there are exceptions and complexities as many high authorities, judicial and academic, cited by him indicate. His references are of particular interest.

Mr. Dennis Rose contributes a chapter on 'Discrimination, Uniformity and Preference'. After enumerating the comparatively few sections which actually confer rights or liberties on individuals, or which deal with discrimination, he stresses that the comparatively small number of judicial decisions is not an indication of any lack of importance of this subject. He discusses discrimination introduced by amending legislation, 'indirect' discrimination and discrimination resulting from State action. Such matters as the incidence of the defence power, the position of residents of different States, 'growth' centres, the phrase 'states or parts of states' and invalidity under S.117 are debated. A thoughtful contribution on a difficult and important subject.

Reform of the Constitution and the 1973 session of the Constitutional Convention is the subject chosen by Dr. Lumb. He outlines the conflicting approaches governing those seeking constitutional changes including the varying attitudes towards tied grants. He traces the history of referenda and attempts at legislative changes and discusses the September 1973 Convention which (he says) curiously enough stemmed from the States' sphere.

The concluding chapter is an exploratory discussion on the theories of Austin and Kelsen by Professor Stoljar of the Institute of Advanced Studies, Australian National University. Professor Stoljar refers to Sawer's acute awareness of the close interrelation of law and politics. His analyses and criticisms of Austin and Kelsen theories will be read with interest.

Generally, this is a scholarly publication and will be helpful both to the practitioner and to the teacher of law. There is naturally some repetition, but the different uses and deductions sometimes made of leading constitutional cases, and even the occasional criticism of High Court decisions, produce an arresting result.

G.W.

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